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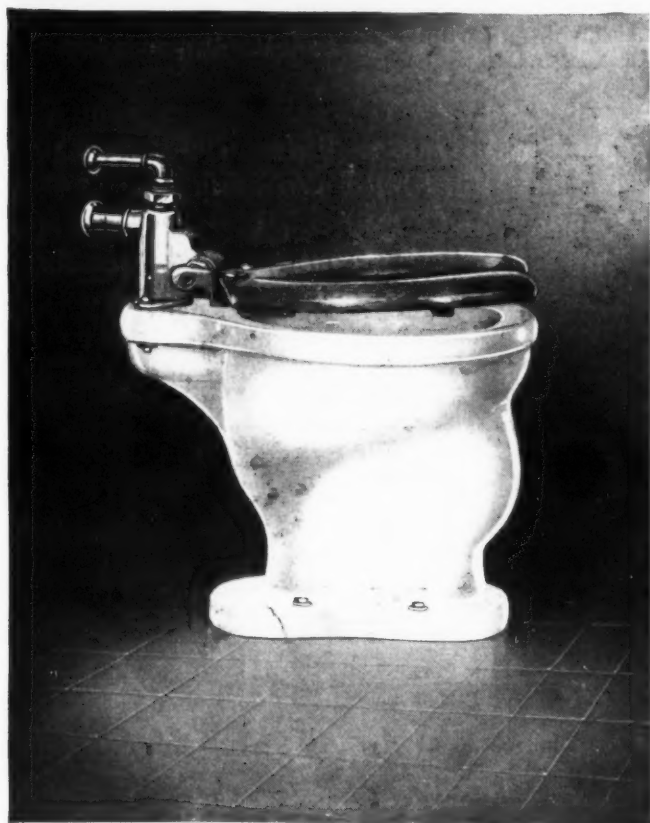
THE AMERICAN
School Board Journal
A PERIODICAL OF SCHOOL ADMINISTRATION



OCTOBER 1930

THE BRUCE PUBLISHING COMPANY
New York MILWAUKEE Chicago

An Endurance Test we are making for You!



Vogel Selfflush Number Ten-A
Seat Action Closet

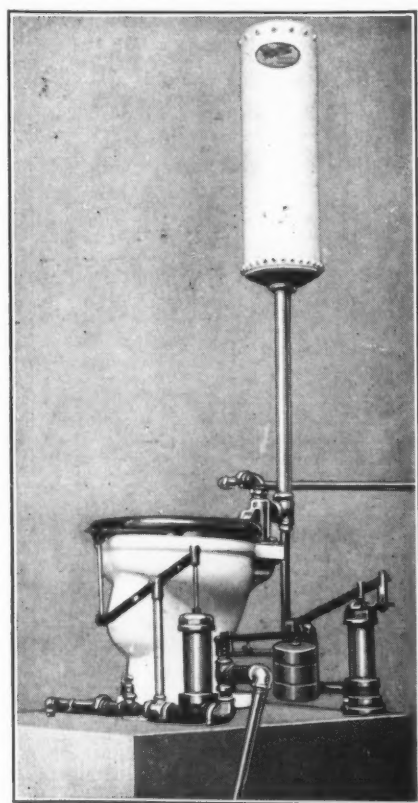
THE **VOGEL** PATENTED NUMBER
TEN, ON AN ENDURANCE
TEST SINCE JULY 16, 1929,
HAS NOW FLUSHED MORE
THAN 200,000 TIMES. . .
*NOT EVEN A WASHER
HAS BEEN RENEWED*

SCHOOL BOARDS are not apt to accept statements regarding the merits of products unless they are backed up by real proofs. So, when we said that **VOGEL** Number Ten and Ten-A Closets would operate year after year without repairs, we knew that we should be in a position to prove it.

The Endurance Test is doing this!

This outfit, shown at the right, taken from stock last July a year ago, has now flushed night and day, 200,000 times, the equivalent of 60 years' actual use. — *And the test continues indefinitely.*

Appearance is also a very important part of school closets, and with this in mind we have done everything to make these closets very attractive for installation in your school. This is especially true of the **VOGEL** Number Ten-A, which has the tank concealed behind the wall. It is a fact that better looking closets receive better care from children. **VOGEL** Number Ten and Ten-A Closets will stand abuse if they have to, but their very appearance makes every one respect their quality.



Vogel Number Ten
on Endurance Test

JOSEPH A. VOGEL CO.

Wilmington, Delaware St. Louis, Missouri

• **VOGEL** PATENTED *Products* •

**IDEAL WRITING
SURFACE**

FIRE-PROOF

**EASILY READ FROM
ANY POSITION**

NO GLARE

**EASY ON
STUDENTS EYES**

**NEVER CRACKS
OR PEELS**

**NO FINISH
TO WEAR OFF**

**SMOOTH VELVET-
LIKE FINISH**

**THE FIRST COST
THE ONLY COST**

**OUTLASTS THE
BUILDING**



Natural Slate Blackboards Are The First Choice of Leading School Authorities

"Pyramid Brand" NATURAL SLATE BLACKBOARDS have won recognition from the leading School Architects.

Superintendents of Buildings find in NATURAL SLATE BLACKBOARDS sound economy in investments.

Principals select them for their part in increasing schoolroom efficiency.

Teachers choose them because they are easy to write on, easy to read from, and easy to clean.

Medical inspectors hail NATURAL SLATE BLACKBOARDS for their sanitary features.

Tax-payers appreciate the great savings they effect in maintenance costs.

"Pyramid Brand" NATURAL SLATE BLACKBOARDS are universally selected!!

Two booklets describing NATURAL SLATE BLACKBOARDS, containing specifications, data, and an interesting story on the quarrying and finishing are yours for the asking.

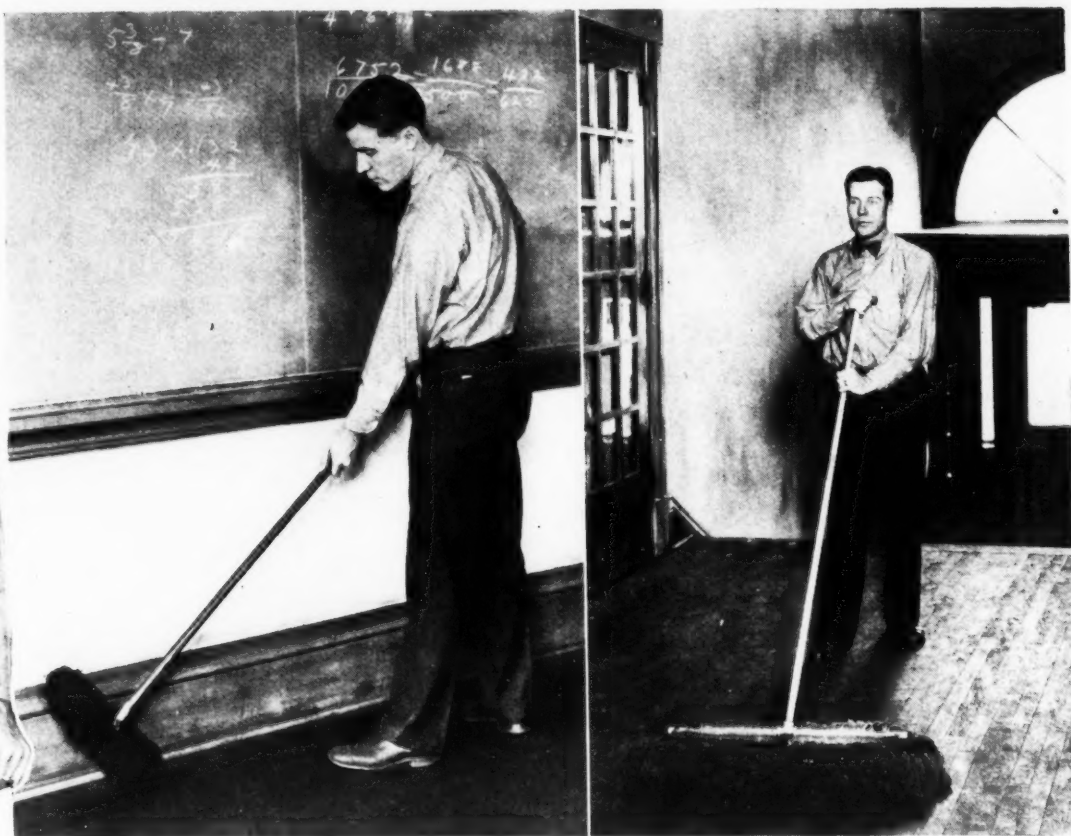


NATURAL SLATE BLACKBOARD CO., 1040 ROBINSON AVE., PEN ARGYL, PA.

BRANCH OFFICES IN ALL PRINCIPAL CITIES

NATURAL SLATE BLACKBOARDS

Natural Slate Blackboards Outlast the Building



EVERY JANITOR CAN BE A MODEL JANITOR—

If He Is Provided with the Tools and Materials
Specified by the Originators of the

MIDLAND SCHOOL HOUSEKEEPING SYSTEM

SEND IN YOUR
REQUESTS FOR
COMPLETE TEXT
BOOK SERIES ON
SCIENTIFIC SCHOOL
BUILDING UPKEEP

Economical maintenance—after thorough preparation has been proven possible in hundreds of schools the country over. To those that are trusted with the upkeep of this most valuable of public property — we say — “Condition your buildings permanently — inspect frequently and you can keep them properly at a surprisingly low cost. It promotes health, happiness and efficiency among pupils and teachers and it saves the district money. We have approached this problem seriously and solved it satisfactorily—let us demonstrate the Midland School Housekeeping System in your school.”

MIDLAND CHEMICAL LABORATORIES, INC.
DUBUQUE, IOWA

KEWANEE

STEEL BOILERS

Steel, riveted construction; strong enough to stand the ravages of time, and the stress and strain imposed on every boiler; add extra years to the life of Kewanee Boilers.

Those extra years—plus the fuel saving guaranteed for every year by correct, unskimped design—make a Kewanee by far the best boiler investment an owner can have.

The arrival of Type "R" Steel Residence Boiler means that every building, without exception, can now have the advantages of Kewanee's superior design and construction.

KEWANEE BOILER CORPORATION

division of American Radiator & Standard Sanitary Corporation

KEWANEE, ILLINOIS Branches in Principal Cities

MEMBER OF STEEL HEATING BOILER INSTITUTE

**It Costs Less to
OWN a KEWANEE**



Turn back the pages a few years and we find fences of wood rails. Then came steel fencing and farmers soon learned that even though it cost a bit more initially the extra years of life made it a better investment.

BEAUTIFUL MARY INSTITUTE

LOCATED on a twenty acre campus in St. Louis County, Mo., Mary Institute is an important addition to a city of fine schools. The architectural conception is the work of Study & Farrar, architects, of St. Louis and the entire

project a monument to the generosity of Mrs. Sarah Wilson of St. Louis. Its purpose is that of a preparatory school for girls.

Permanent beauty of the building's interior is provided for by Par-Lock (Specification Form B) applied to the inner face of all exterior walls receiving plaster finish, all interior concrete surfaces as well as the concrete joist-tile ceilings. Par-Lock has also been specified for the principal's house, not yet constructed.

The Gamble Construction Co. of St. Louis, are the general contractors, with the plastering contract in the hands of Dunn & Campbell, also of St. Louis. Par-Lock was applied by the Par-Lock Appliers of St. Louis.

THE VORTEX MANUFACTURING CO. • 1987 West 77th Street, Cleveland, Ohio



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**PAR-LOCK
APPLIERS**
At Any Point
Listed

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425 Orange Street

ATLANTA,
Bona Allen Building

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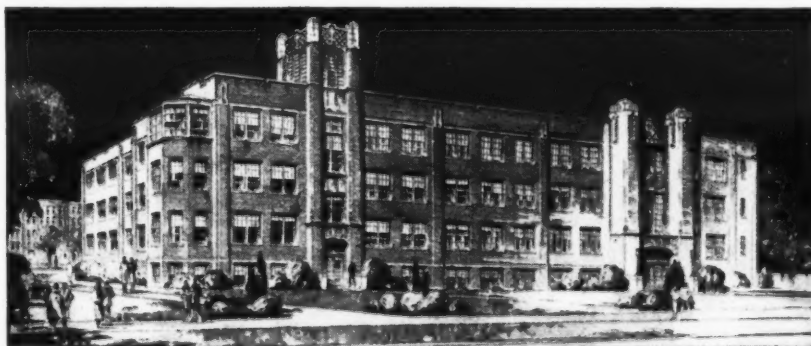
Another Complete Johnson Control Installation

The Johnson System of Heat & Humidity Control in the Messmer High School building, Milwaukee, covers every heating and ventilating source of the building. ¶The installation here is divided into three main groups: the classroom section, the auditorium section, the gymnasium section: each group under separate Johnson Dual Control. ¶Thus each department of the building is temperature controlled independently of the balance of the building: heated at normal as the sections are occupied and in use, the temperature automatically reduced when the sections are vacated and not in use; and in the same manner automatically returned to normal when again occupied and in use. ¶It is not necessary to keep steam on for the entire building to heat only the section or rooms that are in use: and it is not necessary to maintain normal heat in rooms or departments when not utilized: the Johnson Dual System Control automatically raising and lowering the heat in accordance with each section's hours of occupancy. ¶In addition, all valves and dampers in connection with the fresh air and ventilating units are Johnson controlled; including control on the individual unit heaters in separate rooms—such as the cafeteria, swimming pools, locker rooms, gymnasium, auditorium, classrooms, toilet rooms, etc.

JOHNSON SERVICE COMPANY, MILWAUKEE, WISCONSIN
149 East Michigan Street

Established 1885

BRANCHES IN ALL PRINCIPAL CITIES



Messmer High School, Milwaukee,
Herbst & Kuenzli, Architects.
Stoehr & Laudon, Inc., Contractors.

JOHNSON SERVICE

—includes
Installation of Johnson apparatus by Johnson men only.
The company's responsibility behind each installation made.
Inspection of each job annually.
Emergency attention within twenty-four hours anywhere.
Efficient performance of the apparatus always.

JOHNSON HEAT AND HUMIDITY CONTROL

Von Duprin

Self-Releasing Fire and Panic Exit Latches

The Satisfaction of Sheer Strength

To the man who admires good craftsmanship, there is great satisfaction in things that are made as strong as men know how to make them; there is something close to exaltation in the feeling of sheer strength, of durability, of dependability. Here is something that will LAST!

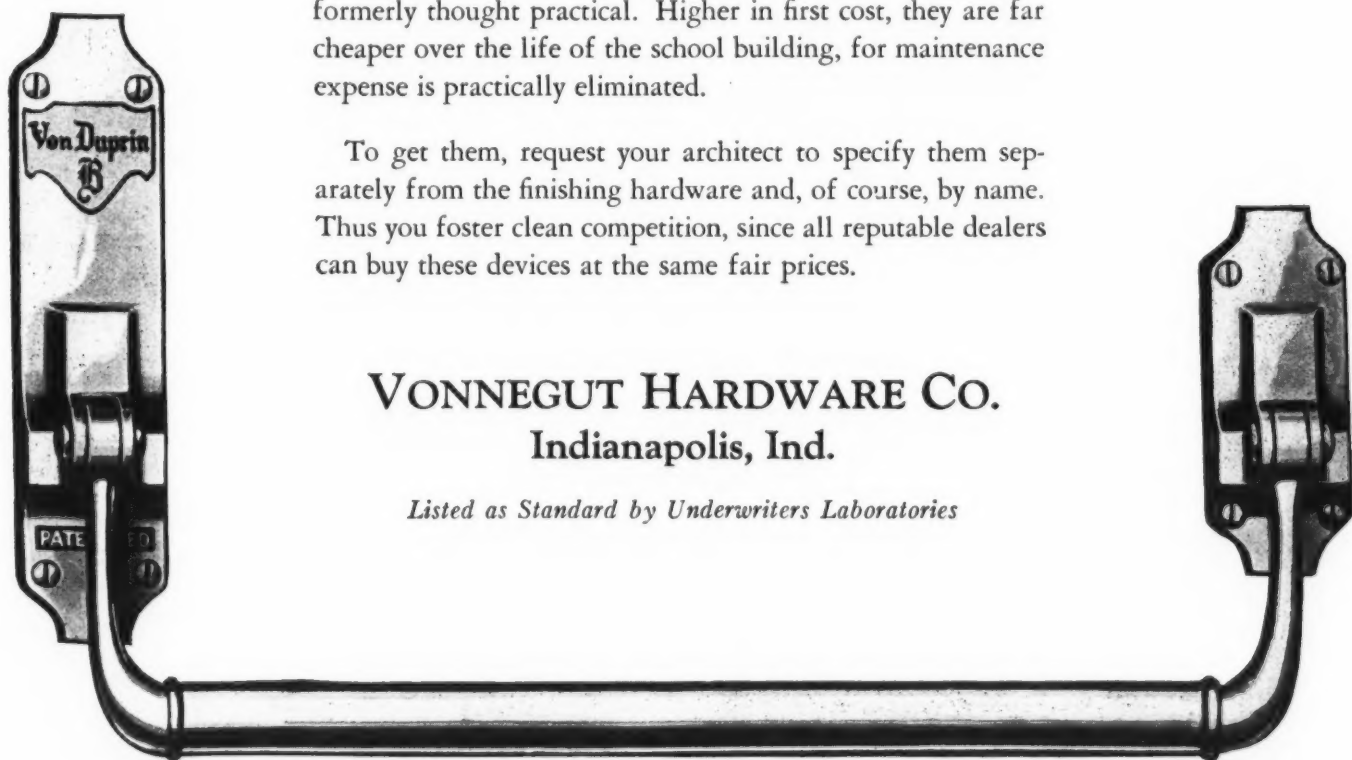
*Sweets
Pages C3130-C3135*

For such men we make the new series genuine Type "B" Von Duprin devices. They are made very carefully, from the best materials we know, with far heavier parts than were formerly thought practical. Higher in first cost, they are far cheaper over the life of the school building, for maintenance expense is practically eliminated.

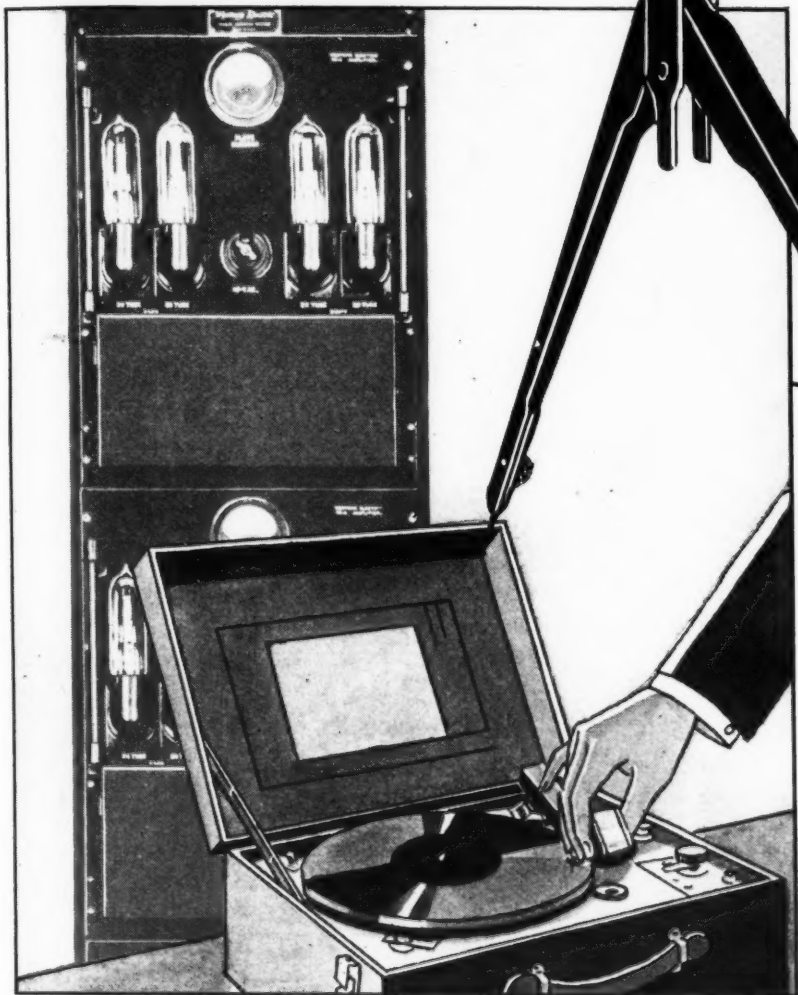
To get them, request your architect to specify them separately from the finishing hardware and, of course, by name. Thus you foster clean competition, since all reputable dealers can buy these devices at the same fair prices.

VONNEGUT HARDWARE CO.
Indianapolis, Ind.

Listed as Standard by Underwriters Laboratories



WIDEN THE HEARING CIRCLE

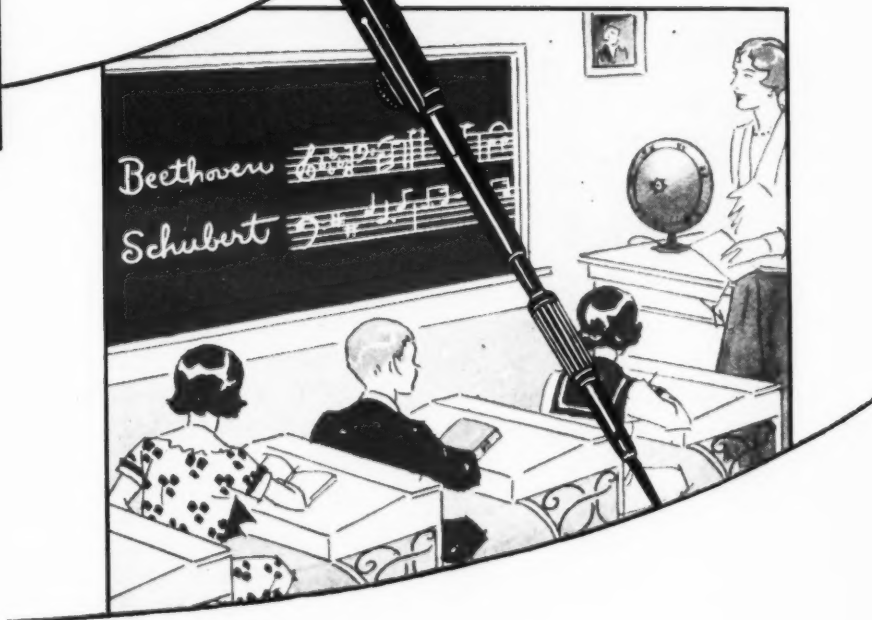


110 MUSICIANS IN EVERY CLASSROOM!

Now—for a few cents an hour—you can have a great orchestra playing in every classroom at the same time. You can give your students any kind of program at any hour of the day. Just install the Western Electric Music Reproduction System.

This apparatus plays laterally-cut phonograph records, making available a long list of the best known classics. The equipment amplifies in full rich tones that do full justice to the players' artistry. The music is distributed throughout the building to loudspeakers in various rooms.

You will be interested in learning more about the



possibilities of this apparatus which is made by the makers of Bell Telephones. Just send the coupon.

* * *

Also ask about the Western Electric No. 4-A Audiometer which measures accurately and quickly the acuity of pupils' hearing.

GRAYBAR ELECTRIC CO., ASB-10-30
Graybar Building, New York, N. Y.

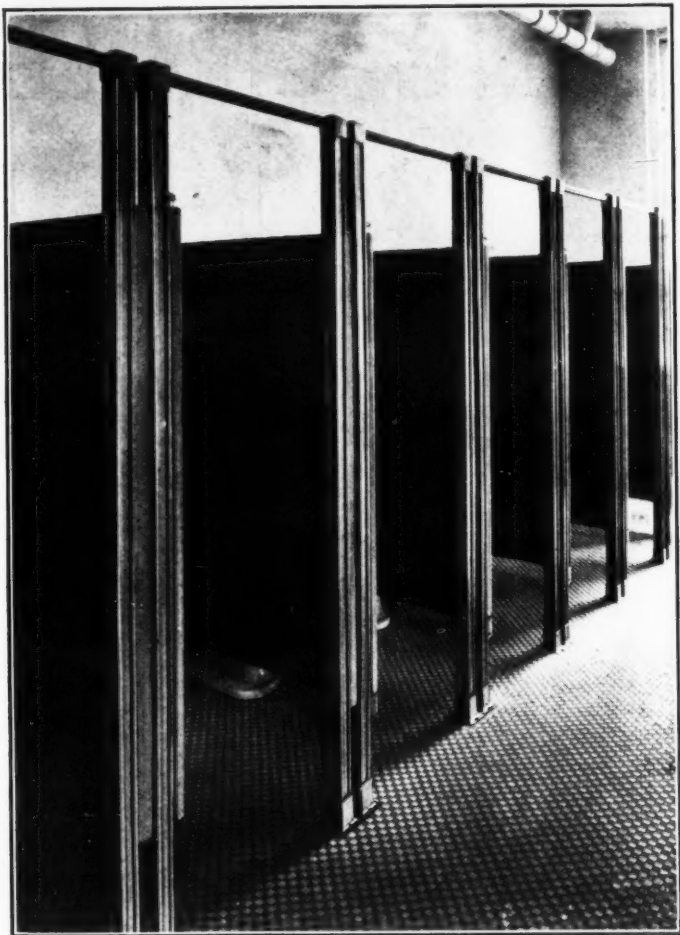
Gentlemen: Please send us illustrated booklet on the Music Reproduction System.

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ADDRESS.....
CITY..... STATE.....

Western Electric

PUBLIC ADDRESS AND MUSIC REPRODUCTION SYSTEMS

Distributed by GRAYBAR Electric Company



In Lincoln School, Nutley, N. J.



Uncensored Recollections

UNCENSORED recollections of your childhood doubtless include memories of school toilet walls and "stalls" defaced by sundry words not listed in Webster's Unabridged, as well as anatomical sketches, if not too humorous to mention, at least too intimate to discuss in polite society. "Sex appeal," without benefit of censor, attained a high pitch in the "good" old days—with a resultant deterioration of juvenile morale.

The day of the neglected school toilet room is gone. Today, for the benefit of Young America, we have clean, light, wholesome toilet accommodations—no small element in which are Sanymetal Steel Toilet Compartments. Is your school so equipped?

Sanymetal Products for Schools are: Toilet, shower, dressing and urinal compartments. Corridor and smoke screens. Metal doors and wainscot. Sanymetal Gravity Hinges. Write for New Catalog No. 30.

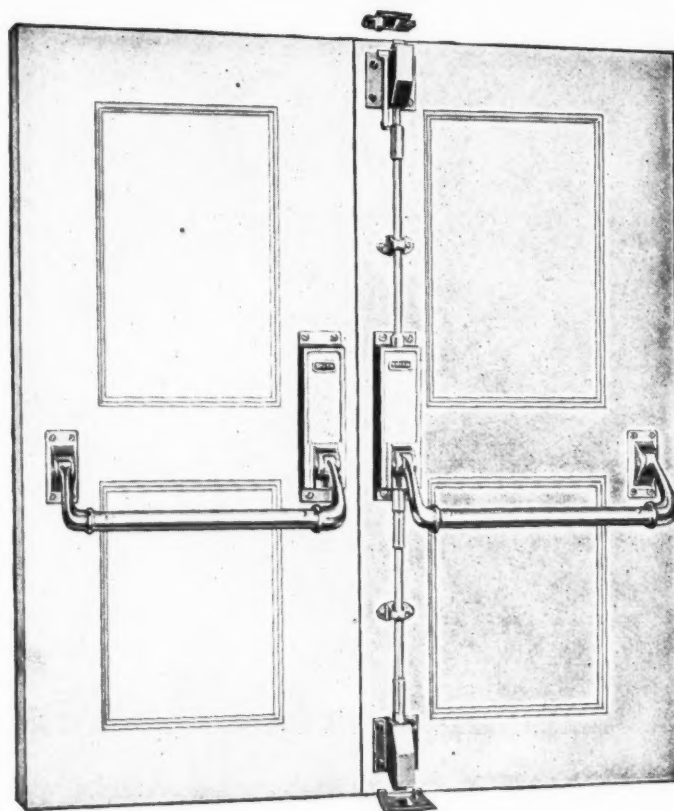
The Sanymetal Products Co.
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Sanymetal
TRADE MARK
U.S. REG. *Toilet and Office*
PARTITIONS

SMITH'S IMPROVED PANIC EXIT LOCKS

NO. 80 LINE

Gravity Panic Exit Bolts



*Inside View
Has Outside Trim.*

*Inside View
No Outside Trim.*

Bolts are operated by a slight pressure on the Cross Bar.

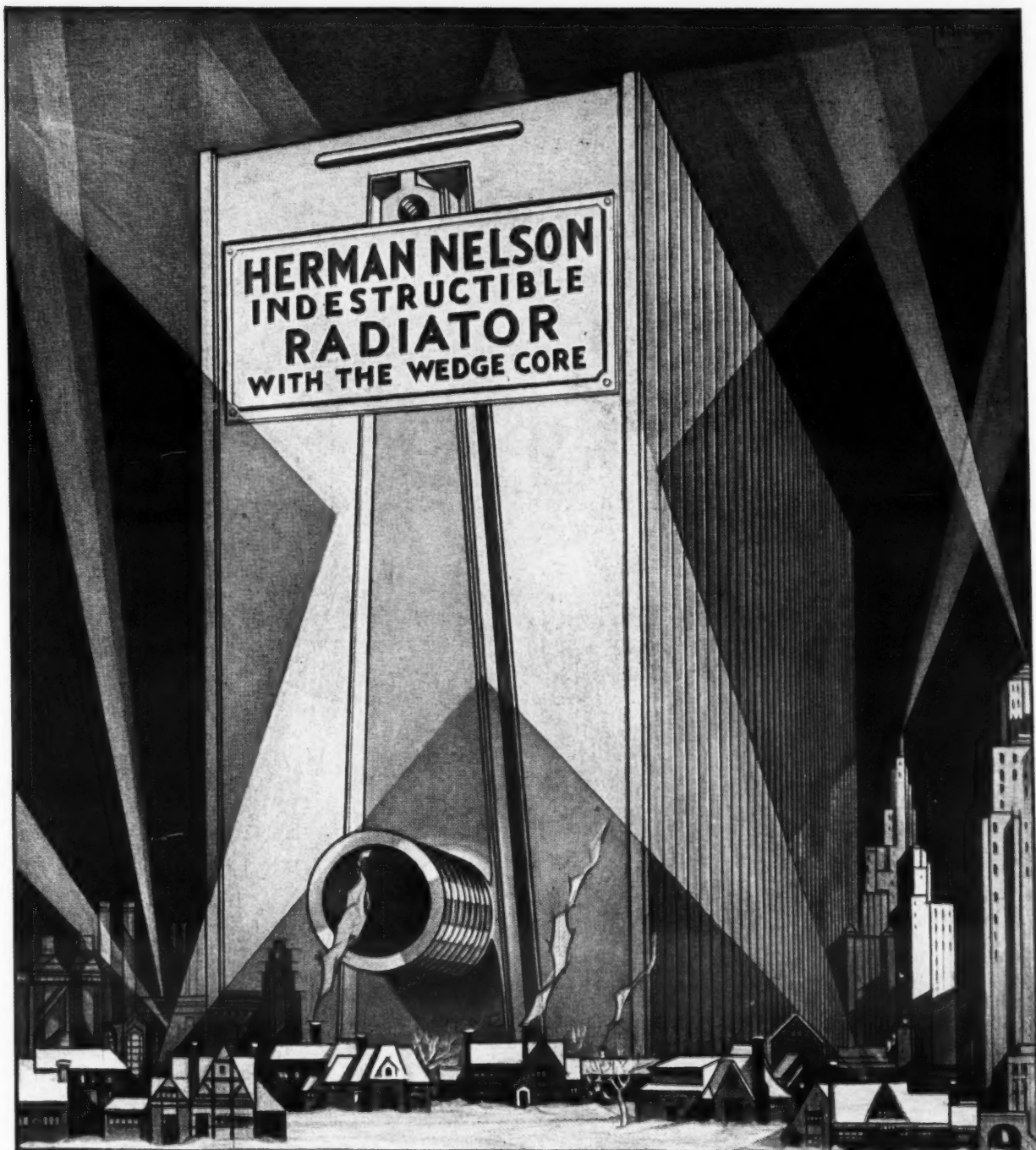
Bolts are not dependent on springs for opening or closing operation.

Simple but sturdy in construction and easily installed.

Will operate perfectly in connection with standard makes of door closers.

Catalogue No. 30 with Supplement "A" sent on request.

Manufactured by
THE STEFFENS-AMBERG CO.
260-270 Morris Ave.
NEWARK, N. J.



OUR CONTRIBUTION TO THE ART OF HEATING AND VENTILATION

The Herman Nelson Wedge Core Radiator is an exclusive feature of all Herman Nelson Heating and Ventilating Products and accounts for their satisfactory performance. + + + +

THE HERMAN NELSON CORPORATION MOLINE
ILLINOIS

THE UNIVENT IS THE CONNECTING LINK BETWEEN OUTDOORS AND INDOORS



Now she enjoys "recess air" *right in the schoolroom*

GET the spirit of vibrant glowing health, and sparkling alertness portrayed in this picture. It is through the practical realization of the Greek and Roman ideal of the "sound mind in sound body", that educators of today are fitting our school boys and girls to fulfill their responsibilities as leaders of America tomorrow.

In this great work Univent Ventilation has played an important part, for it makes it possible for the children to work in the same health giving invigorating atmosphere that they enjoy during recess. As a result standards of school attendance are higher in Univent Ventilated schools and the pupils are better able to concentrate—to grasp and retain the

fundamentals that will prove so valuable in future years. Teachers, too, find their work in such an atmosphere more interesting and less wearing.

The Univent draws air directly from outdoors—cleans and warms it to a comfortable temperature, and delivers it to every one in the room—with refreshing invigorating air motion, but without drafts.

Schoolboard members, superintendents, teachers, and all who are responsible for the physical and mental welfare of the children, may learn more about Univent Ventilation by consulting their architect, heating engineer or our nearest sales office. Or if you prefer write for our illustrated book, "Univent Ventilation."

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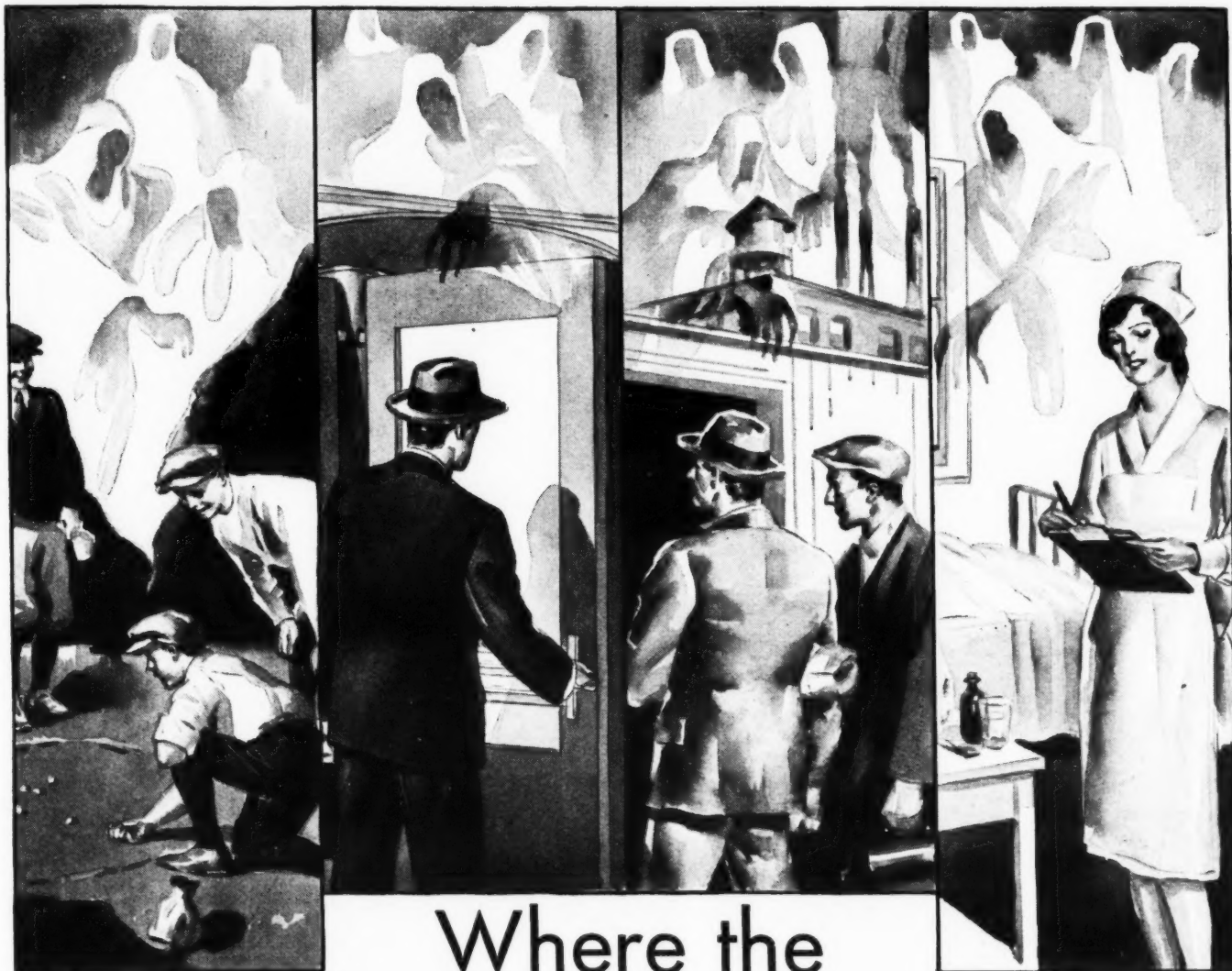
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*Makers of the *Univent*, for the ventilation of schools, offices, churches and all buildings having an acute ventilating problem—the *Herman Nelson Invisible Radiator*, for residences, apartments, hotels, offices and monumental structures—the *Herman Nelson hiJet Heater*, for economical distribution of heat in factories, mills, garages, warehouses, and smaller buildings.



Where the Deadly Legions Gather He Fights Your Battle

Every school, industrial plant, hospital, public building and similar place where humans gather is a potential rallying ground for the unseen legions of mankind's greatest enemy.



Wherever sanitation may be an acute problem, the Clow Soldier of Sanitation is your logical ally. Call him in. With his long experience and his complete line of specialized fixtures he naturally is, and can afford to be, unbiased in his ideas. This is L. E. Woessner, Loan and Trust Bldg., Milwaukee, Wis.

To "defeat" the germs that make up this army—and to lower the costs through the years—through proper plumbing facilities, has been the job of the Clow Sanitation Soldier since 1878.

It was a Clow Man who was called into a prominent Southern city when Typhoid had all but won the battle.

It was a Clow Man who was drafted into Cuba as an important ally against the deadly legions of Malaria.

Today these Clow Soldiers of Sanitation carry on, less spectacularly, but even more scientifically and effectively. They have

developed the Clow-Madden Automatic Closet for schools and public places. They have given us the sanitary drinking fountain. And they have developed a wide variety of fixtures to meet special and dangerous sanitary conditions.

52 years of experience in the battle against pollution, ill-health, and uncleanness give the Clow Soldiers unmatched knowledge of mass plumbing needs.

The largest line of specialized fixtures, carefully built, help them help you to meet any requirement no matter how specialized or acute.

CLOW

CHICAGO

PREFERRED FOR EXACTING PLUMBING SINCE 1878

Consult your architect

ROMPING.. DASHING.. LAUGHING



*Safe within the
fenced
playground!*

Watch the children at recess. Notice how autumn increases the dangers from street traffic. Speeding motorists, intent on pleasure. Children at baseball and other running games—hard to keep them "within bounds."

Your school needs a Cyclone Fence enclosure—to protect the children at play, and to protect school property.

Parents expect school officials to provide safety for children on school playgrounds. Thousands of schools have installed Cyclone Fence.

It's strong and durable—built to last! Made of copper-steel, heavily hot-dip galvanized. No annual painting, no upkeep cost of any kind.



All chain link fence is not Cyclone. This nameplate identifies the genuine Cyclone Fence.

Our trained crews erect Cyclone Fence anywhere. Write for information—or phone and a Cyclone representative will call. Take the first step *today*—to keep the children *safe*!

Cyclone Fence

REG. U.S. PAT. OFF.

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General Offices: Waukegan, Ill.
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PRINCIPAL SUBSIDIARY MANUFACTURING COMPANIES

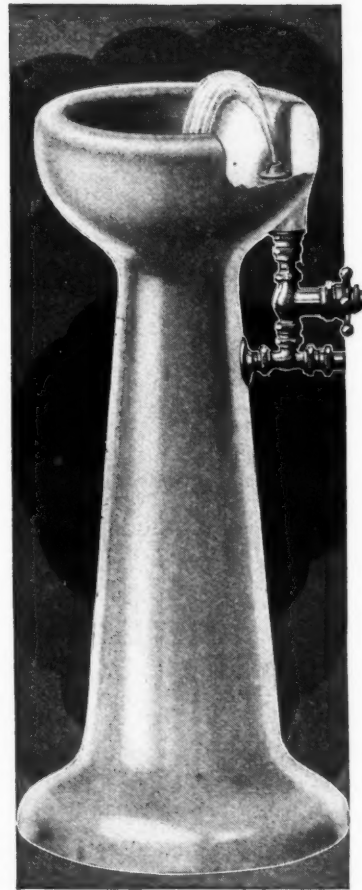
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A GUARDIAN OF HEALTH!

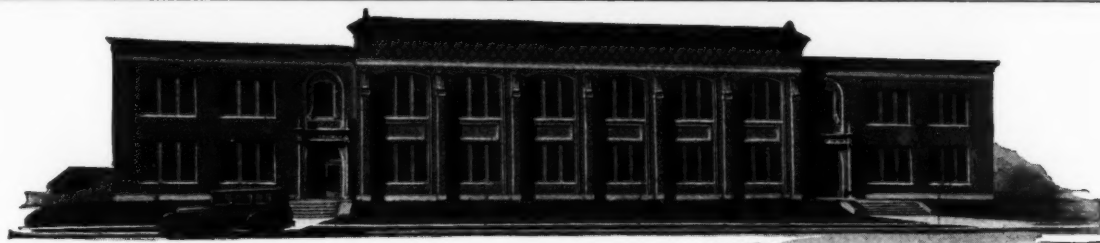
Water flowing from R-S drinking fountains is pure . . . free from the contamination of lip contact . . . just a good, refreshing drink safeguarded by a patented Vertico-Slant feature. This arrangement provides a slight slant stream which prevents water from falling back upon the jet.

Let us give you complete information covering the line of Rundle-Spence Sanitary Drinking Fountains now available in colors.

RUNDLE-SPENCE MFG. CO.

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WOLFIN SCHOOL, AMARILLO, TEXAS. MISS ETHEL JACKSON, PRINCIPAL

GENERAL ELECTRIC COMMERCIAL REFRIGERATOR

PASSES ITS EXAMINATION *with honors*

*And the Wolfin School selects it
for its up-to-the-minute Cafeteria*

WHEN the beautiful Wolfin School at Amarillo, Texas, was selecting a refrigerator for its model cafeteria, every conceivable point was taken under consideration. Six hundred and twenty-eight pupils are enrolled in this modern institution. Cafeteria service must be speedy—efficient. Food and milk must be kept unfailingly fresh and wholesome. Utterly dependable refrigeration, under such conditions, is essential.

The Wolfin School authorities found the General Electric Commercial Refrigerator to be so conveniently arranged that all foods were kept instantly available. No need for attendants to "walk in" to such a refrigerator; it is merely necessary to "reach in."

No waste space was found in *this* Refrigerator—no large unused areas that would cost money to refrigerate. The Wolfin School soon realized that the General Electric Commercial Refrigerator is built not merely to give years of quiet, reliable, efficient service—but to give that service *economically*—at a big saving in operation costs.

Sanitation was considered—quiet operation—attractive appearance—and especially *durability and lasting wear*. In the General Electric Commercial Refrigerator, all moving parts are protected from air, dirt and moisture with steel walls hermetically sealed! It was a stiff examination for any refrigerator to undergo. The General Electric Commercial Refrigerator passed with colors flying!

. . .

We will gladly send a specialist to discuss your particular requirements. Or drop us a line for our illustrated catalog. Address Section CK-10, Electric Refrigeration Dept., General Electric Co., Hanna Bldg., 1400 Euclid Ave., Cleveland, O.



GENERAL ELECTRIC

COMMERCIAL REFRIGERATOR

HOUSEHOLD REFRIGERATORS

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Illinois, Iowa, and Missouri. Over 20 Years Experience.

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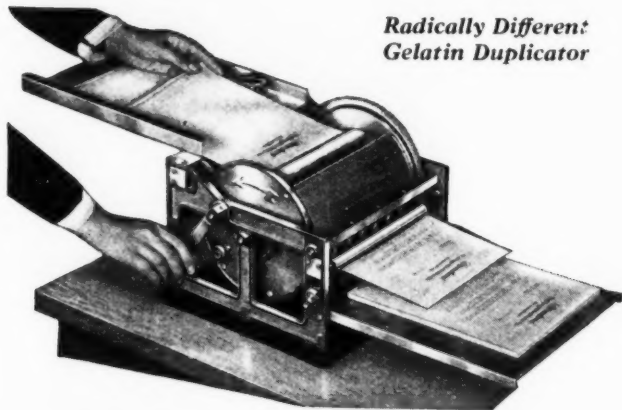
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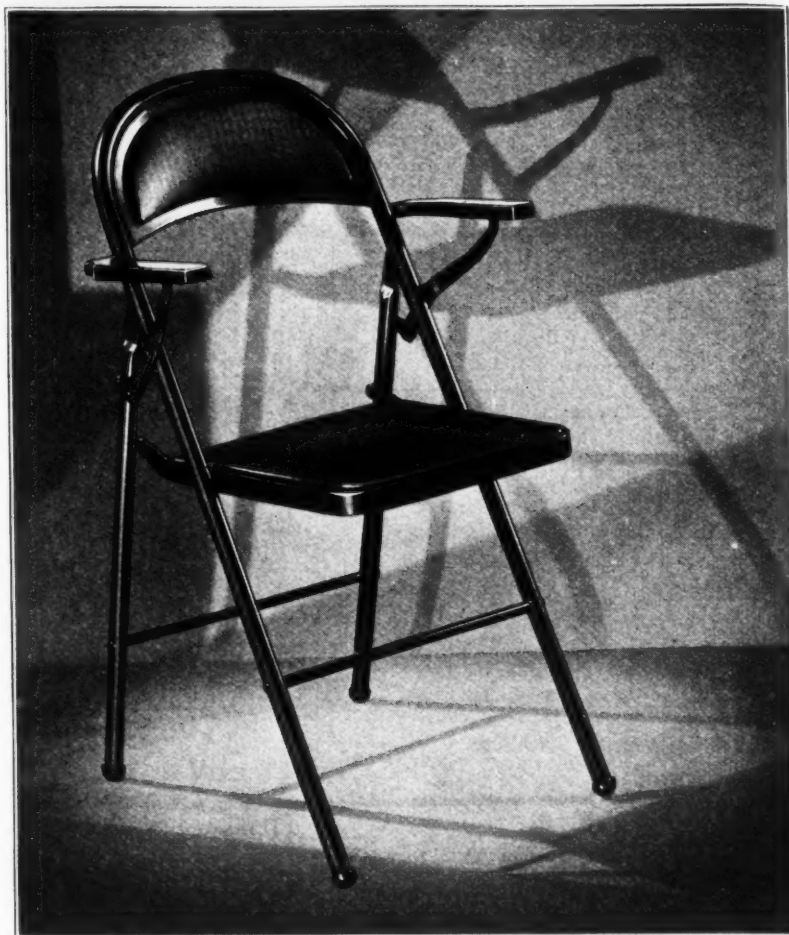
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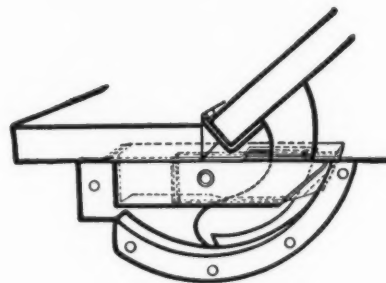
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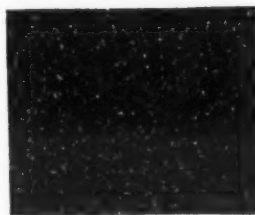
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that go back 50 years, take 25 years off of teaching progress

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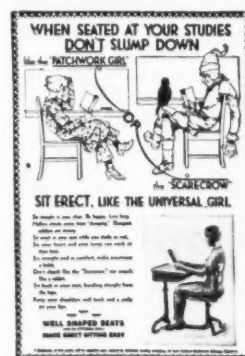
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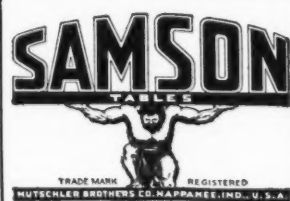
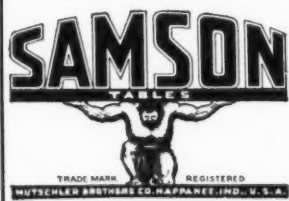
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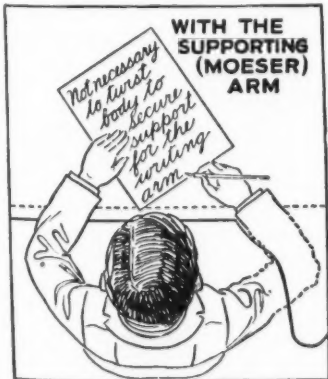
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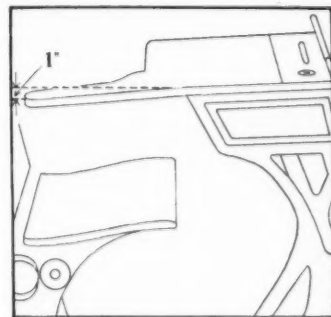
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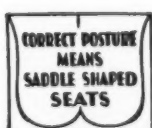
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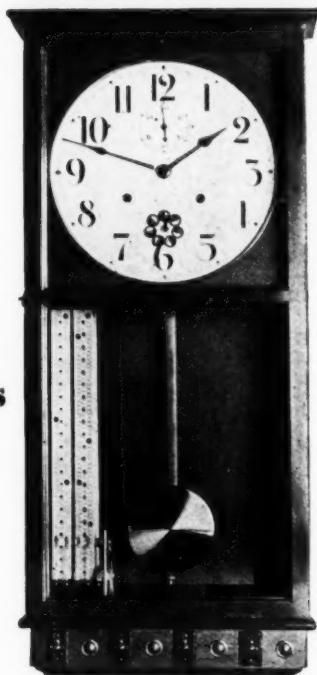
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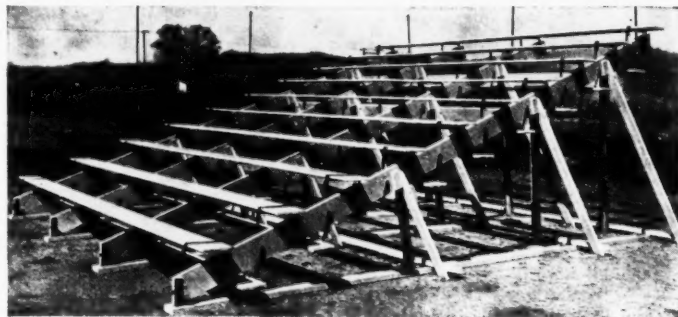
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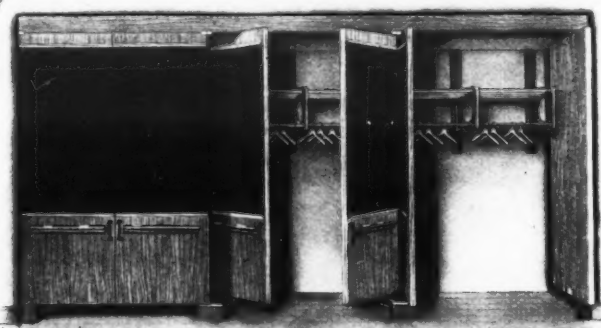
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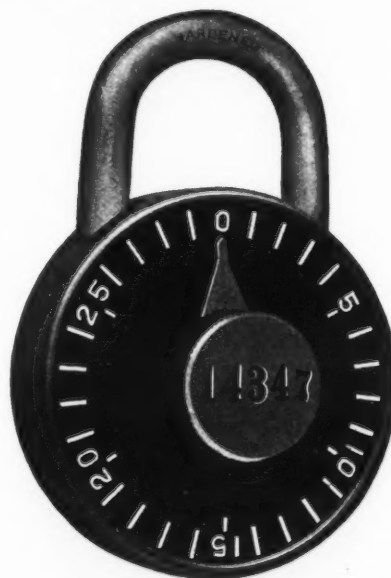
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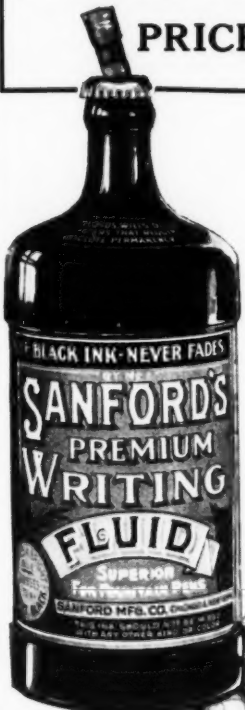
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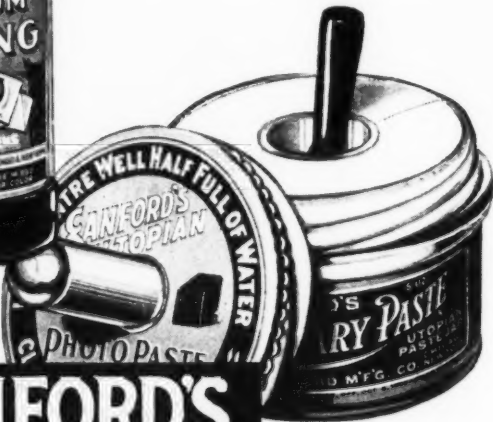
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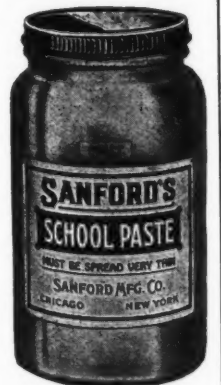


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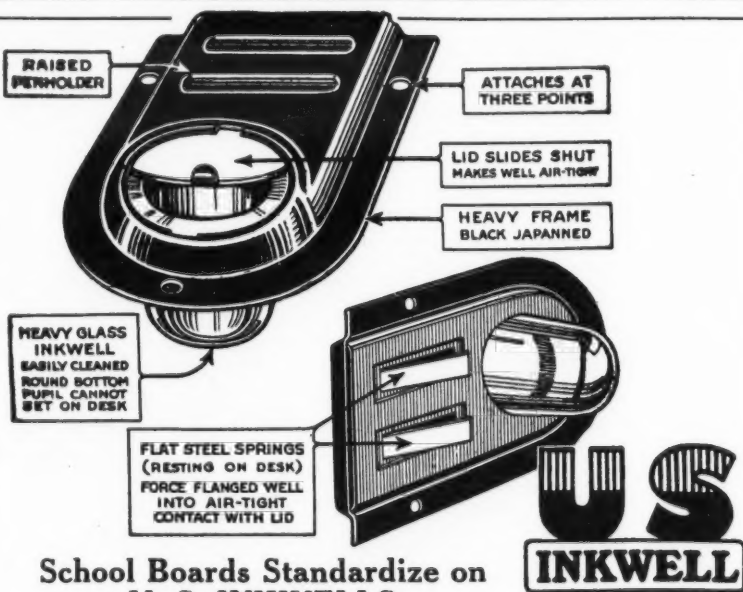
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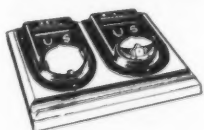
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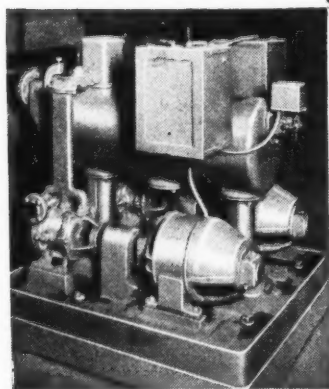
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THE AMERICAN School Board Journal

OCTOBER,
1930

Eastern Office:
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NEW YORK, N. Y.

A Periodical of School Administration

Published on the first day of the month by
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CHICAGO, ILL.



Present School Momentum

If one were to compare the volume and intensity of the nation's present educational activities with those of any previous period, he would find that they had never been infused with greater zeal and momentum. It was reasonable to assume that, when the interruptions caused by the world war had been overcome, there would be a strengthening of forces and an intensification of effort all along the line.

There is this to be said for the school administrators of the country, that they respond in an exceptional degree to the American spirit—namely, to that vision and constructive ability which has distinguished the nation from all others.

Thus, the American schoolmaster has striven to render more and better service. He has stood for expansion, for higher standards of efficiency, and for a more complete school plant. The American school administrator has backed these aspirations to the fullest. He has refined the machinery and the agencies through which these aims are realized. He is planning, devising, and constructing with greater thoroughness than ever before.

The modern board of education guides the destinies of popular education with a steady hand, with a clear eye to the objectives, and with a splendid grasp of the mission in hand. The modern school superintendent initiates, leads, and governs with unexcelled mastery and power. He inspires the forces of light and intelligence against the forces of darkness and ignorance. In point of scope, momentum, and service, the American school leads the world.

The Editor.

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Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the *Education Index*.

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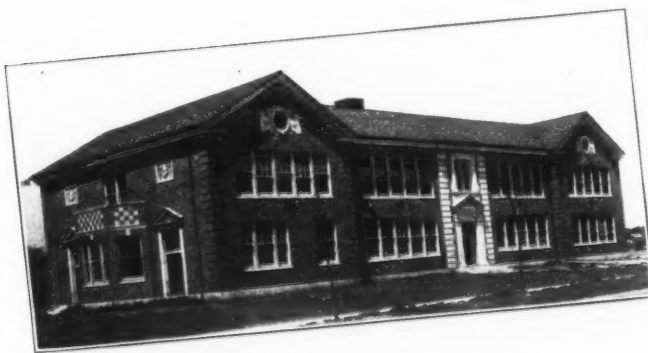
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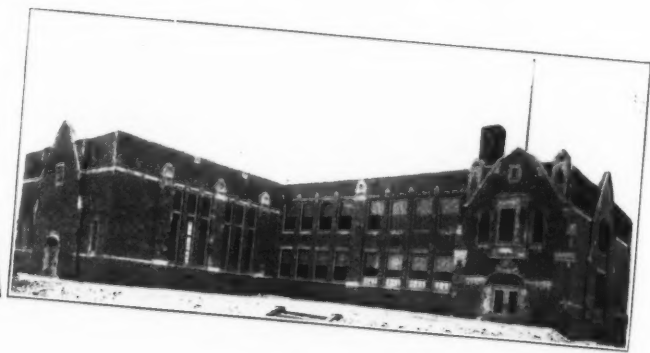
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Spokane, 110 S. Cedar St.
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"STANDARD MAKES EVERY MINUTE COUNT"

THE AMERICAN School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume 81, No. 4

OCTOBER, 1930

Subscription, \$3.00 the Year



A MENACE

The Educator With an Axe to Grind Who Attacks the School Board System

Clearfield's School Adventures—II

Mark Wright, Member of the School Board, Clearfield

Standing Subcommittees

Our new superintendent, Winston Graham, whom we elected recently, has been on the job now for two months. He says he is learning much from Clearfield and its school board, but once in a while we are also getting an idea from him.

At the first meeting of the board which Superintendent Graham attended, he requested that we proceed with our regular business as usual, in order that he might get acquainted with our methods of procedure as well as with our current problems. Beyond being very cordial to each of us, he remained silent as Calvin Coolidge. Mrs. James remarked after the meeting to Sam Jones, chairman of the board, that she would have given a nickel gladly to have discovered what thoughts were running through our new superintendent's mind as he listened to the business of the evening.

At our next meeting some of these thoughts were revealed to us. Mr. Graham talked. And what's more, he handed each of us a typewritten statement of some of his observations to date. While we read this statement, paragraph by paragraph, he explained his points in detail, answered all our questions quite cordially, and cautioned us against voting on the proposals in his report without mature thought and study. His major concern was with our scheme of standing subcommittees. His was a brand-new idea to us. But before the meeting adjourned, we were laughing sheepishly at some of the absurdities of our standing subcommittees.

Then, Sam Jones as chairman, suggested that we adjourn one week to study more thoroughly the written report of our superintendent. Before I went to bed that night, I tucked my copy of the report under the desk lamp in my "den" and resolved to spend the very next evening enjoying it again.

Sitting at ease in front of the fireplace next evening, I read each paragraph again, chuckled some more to myself, and gradually began to think through the whole proposition.

But first, here is what I read: "What are the major functions of the school board? Are they legislative or executive? or both? Are active standing subcommittees of the board legislative or executive?"

"The minutes of the last regular meeting of the board show action taken upon such details as these: 'Upon the recommendation of the standing committee on buildings it was

"Voted: that an incinerator not to exceed \$6 be purchased for the use of the cafeteria.

"Voted: that a wheelbarrow be purchased for the high-school janitor.

"Voted: that steel doormats be purchased.

"Voted: that an extension telephone be installed in the cafeteria office."

"Examination of the minutes of previous meetings of the board shows that action on such minor details as these occupies a prominent place from month to month.

"If this practice is continued indefinitely, history will repeat itself and such absurdities as the following will occur in Clearfield: (1) in Town S—the subcommittee on books and library spent a thousand dollars in purchasing an adult's library for the high school, which was of little use for teaching purposes, and books for the grades which were not at all suited to the needs of the pupils. (2) In Town L—the supply committee, in favoring a particular local dealer, purchased such a poor quality of writing paper that good composition work during the next year was difficult in the extreme. (3) In Town C—the subcommittee on supplies recommended against the purchase

of an electric refrigerator for the homemaking department. (The chairman of this subcommittee was an attorney for an ice-delivery company.) The report was adopted by the board. (4) In Town M—the auto mechanic at the head of the textbook committee determined the Latin book to be used in the high school. (5) The undersigned knows of a case where a subcommittee chairman stopped the use in the schools of a certain United States history, because he did not think it fair to agriculture. He was a prominent local farmer.

"All such cases of overactivity on the part of board subcommittees result from a confusion in the minds of board members as to what they were elected to do. A school board is elected primarily to determine policies, select an expert executive officer, approve new undertakings, and determine expenditures.

"In all such matters as the outlining or changing of courses of study, the selection of textbooks and library books, the supervision of instruction, the selection and promotion or dismissal of teachers and janitors, the problems of schoolhouse construction, boards should not act without the advice of an educational expert.

"This does not mean that the board will have nothing left to do. Instead of being tied down to the details of school organization and administration, the board will be free to devote real thought and energy to the larger problems of school control. These latter problems are too often neglected whenever a board attempts to handle the details of school administration and supervision.

"In other words, the school board should act largely as a legislative body. A very definite distinction should be made between those functions which are legislative and those which are executive. Standing subcommittee invariably tend to befog this difference in functions.

"The whole nature of subcommittee activity is contrary to the best conception of the functions of the school board. These permanent subcommittees are administrative agencies, charged with specific tasks. They tend to effect 'a coö-

dinate superintendency' on the part of members. The realm of the board will most effectively be restricted to directing policy, legislating, planning for the future and in the selection of its administrative expert. To the superintendent should be left the execution of policies and the carrying out of the will of the board. If the board has no confidence in the superintendent, it should employ one who is satisfactory and competent.

"To crystallize definitely this distinction in function, it is recommended that the following action be taken:

"1. That the board concern itself only with matters of policy; that subcommittees be abolished; that the superintendent be held responsible for carrying out administrative details; that in the event an administrative detail arises which is not covered by an established policy, the superintendent be required to formulate and propose a policy covering the matter; and that, after the approval of the proposed policy, modified as the board sees fit, the superintendent be responsible for the carrying out of this policy.

"2. That special committees be employed seldom; that such committees be discharged automatically when reports are made; and that the superintendent be made the executive officer of the board and be held responsible for the proper conduct of the schools.

"These recommendations are offered for your consideration as a part of the service which the undersigned owes his board. Clearfield's school system is growing. Practices which may have been excellent in the past may be inadequate for the present or the future. Foundations should be laid now which will care for continued growth and expansion without unnecessary loss or hindrance.

Yours very truly,
Winston Graham."

Five days later, our board met, discussed the communication at some length, and voted to adopt the recommendations.

After the other board members together with the superintendent had gone home, Sam Jones, sitting beside me in my car, said, "That report has opened my eyes. For the first time, I begin to see what as a school board member I have been elected to do."



LUNCHTIME IN THE CAFETERIA AT THE GROVER CLEVELAND ELEMENTARY SCHOOL, TAMPA, FLORIDA

The Teacher and the Board of Education

John Dixon

The relation of the teacher to the board of education, like everything else in the educational world, has undergone changes, many and great. There was a time when the school board gave the teachers' examinations, decided whether or not the applicants were qualified to teach, issued certificates to those whom they deemed qualified for places in the schools, contracted with the teachers employed, determined what books should be used in the schools, visited the classrooms and passed judgment upon the teaching and the discipline, regulated the program of studies, and, in detail, as well as in general, managed the schools.

These were the *good old days* when the teacher and his monitor or assistant frequently spent two hours of each school day sharpening the quill pens with which the pupils wrote, and when the sole accomplishment of an entire half day was often no more than to write twelve lines in the copybook, following the copy meticulously prepared by the teacher in each copybook. These were the days when, according to Horace Mann, *discipline* was so bad that in one small New England state three hundred schools were broken up in one winter by unruly pupils. Obviously there was plenty for the boards of education to do.

The First School Boards

Accustomed as we are to the school board as an essential factor in the management of the schools, it is hard for us to conceive of a time when the schools were managed without school boards, yet the records show that the first recognition of school boards as a part of the legal machinery of the state was in 1826 in Massachusetts. This is only a little more than a hundred years ago. Prior to that all the various matters pertaining to the schools were settled by the community as a whole assembled in the town meetings. And even when boards were chosen the community was slow in granting them powers. After a time, however, the boards were authorized to examine and certify teachers. Later, the boards were empowered with authority to visit, and inspect the schools and the instruction, and finally the authority to employ the teachers was also given to the boards.

So, in these early days, the days of John Quincy Adams and Andrew Jackson, the relations which the board of education had with the teachers were inclusive and detailed. All matters, no matter whether educational or administrative, no matter how big nor how small were the province of the board. In this early relationship between board and teachers there was nothing uncertain.

The Committee System

Then, with the growth of the country, and the multiplication and expansion of cities, the needs and demands of the schools multiplied until the school board found it difficult to fulfill their duties. In order to meet this situation the boards devised the committee system of management. Larger boards were chosen, and a committee was appointed to have charge of each large division of school affairs, as, the employment of teachers, the instruction, the textbooks. This practice of committee management became general, and the number of committees usually ranged from a dozen to twenty per board. It is recorded that attached to one large city board there were 74 committees, and to another 79 committees. In this new arrangement the board as a whole had less to do with the individual teachers than it had under the unit system of board control.

Time was when the school boards and the teachers came into contact on all matters of school policy and management. In the present day of highly organized professional administration of school systems teachers and school boards are separated by an ever widening gap. And still there are definite relations which by the very nature of things must be maintained for the welfare of the schools, of the children. A teacher here describes these necessary relationships in a most helpful paper. — *The Editor*.

But, after a considerable trial, the committee system also proved cumbersome and inadequate, and finally, in 1875, the plan of having a superintendent of schools elected by the board to act as their executive and adviser was inaugurated. The large boards and numerous committees were gradually discontinued, and the method of today with a superintendent and a board of but five or seven members became almost universal. Under this system the relations existing between the board of education and the teachers have changed again, and all matters of detail connected with the teachers are referred to the superintendent, and when necessary through him to the board.

Boards Now Largely Legislative

The past 25 years have seen the duties of school management differentiated until today the line of cleavage between the duties which the board of education delegates and those which it handles directly is reasonably clear. In this period the board has tended to become quite distinctly a legislative body, and to decrease more and more its administrative and executive functions. The larger city boards now centralize authority and responsibility in the hands of paid experts, such as the business manager, the accountant, the purchasing agent, and the superintendent of buildings and grounds, and make these all subject to the city superintendent of schools who is the executive-in-chief and professional adviser of the board.

So, boards of education have been freed largely from the details of school organization and administration, and give their attention to the general problems of school projection and control. They give much care to the choice of the superintendent of schools and the other officials who work under him; they select and purchase school sites; they determine school budgets; they attend to the construction of new buildings and to the repair of old ones; they distribute funds to the various departments of the school system; they pass on bills of expenditure; they secure and discuss reports on the progress of the schools in all departments of effort; and, in general, they deal with matters which concern the schools as a whole. By and with the advice of their superintendent, they shape the general policies of the schools. Their affairs, however, are largely those of business.

Distant But Needed Relations

Now, under this modern system of board management, the teacher, except in the smallest system of schools, seldom knows the members of the board of education, often scarcely knows even their names. Her contract officially comes from them, and the checks in payment for her services in the schools are signed by their secretary; she reads of their meetings and actions as these are reported in the press, and, occasionally, the individual teacher may meet some member or members of the board socially. But, in general, the contacts between the teachers and the board of education are infrequent, incidental, and of little professional significance.

In an organization where the board of education plays so large a part, and where the

teachers in the schools play so large a part, it is evident that there must be numerous and positive lines of relationship. It is also evident that insofar as direct contacts are concerned, the board in the process of its evolution to meet modern demands, has tended to become more and more remote from any direct contact with the teachers of the schools. Some teachers and some board members have wondered whether this situation is a desirable one, and whether in achieving efficiency of management, the board has not lost at the same time a personal relationship vital to the ultimate well-being of the schools.

Conditions Control Relations

It is no doubt true that in changing to meet modern conditions some of the good in the former methods has been lost. It is probably true that some school systems may be overorganized so that personal relationships are unduly subordinated. But, we must recognize also the fact that there never was so much freedom and so much genuine accomplishment in the schools as we have at the present moment, and under the present system. It may be possible also that we are held by traditional expectations and demand relationships which under changed conditions have become impossible. Also, the voice of the individual teacher does reach the board of education, but through a different channel. Under the old system the teacher came into direct relationship with some visiting board member, or perhaps with a committee of two or three board members. The visits of these members were formal and infrequent, and their inspection and conclusions were anything but expert. Instead of the visiting board member or committee, the teacher now has direct and frequent contact with a skilled principal and superintendent, and through them when necessary, relationship with the board. When one realizes how many teachers there are, and how busy a thing life is for both teachers and board members, it is plain that any extended number of relationships with individual teachers would be impossible for lack of time.

Again, in the very exceptional instance, where the individual teacher does not feel that her case is adequately represented by the principal or the superintendent, there is recourse to the president of the board, who takes the matter up with the superintendent before referring it to the board officially. In any large enterprise there must be organization, and if the enterprise is to function properly it is necessary that such department shall keep in the main within its own province of action. And this, of course, is just as true of the organization of a system of schools as it is of any other organization. The aim of this is to get things done, to give the greatest service to the greatest number.

Some Accepted Relationships

So, in general, we reach several almost universally accepted conclusions with regard to the relations between the teacher and the board of education:

The board officially, except in the matters of contract and payment of salary, has no proper connection with the individual teacher as such;

The teacher, as such, except in the matters of contract and payment of salary, has no proper connection officially with the board of education;

When the individual teacher goes to the board of education or to individual members of the board of education with matters concerning the schools, there is quite certain to be misunderstanding and a spoiling of the proper relationship between the teacher and the principal and superintendent;

When individual board members make a practice of discussing the business of the schools with individual teachers and of acting directly on information so received, the same situation is likely to result;

If the board, or members of the board, feel that the board should know more of the details of what is going on in the schools, it is the duty of the board to require that such matters shall be placed before them by the superintendent.

It follows, of course, that should the majority of the board lose faith in the integrity, capacity, and effectiveness of their superintendent of schools, then the usefulness of that superintendent in that system of schools is at an end. There are few organizations in which mutual faith, understanding, and cooperation are so indispensable as in a system of schools.

Influence and Attitude of Board

But, the relation which the board of education has to the teachers it employs is by no means confined to its formal board actions. The attitude which the board has toward the teachers and the schools, and the personal qualifications of the men and women who make up the board exert a powerful influence upon the schools and the teachers. Environment and atmosphere, particularly in an activity so intensely personal as teaching, are strong forces favoring or hindering the success of the teacher, and these are determined largely by the character and attitude of the board of education. So, the moment the teacher enters her classroom, and every day she works in it, she is dealing with a situation shaped and persistently influenced by the board of education. It is here that the real policy of the schools becomes manifest, that the relations between the teacher and the board of education reach their focus.

A school official of wide experience, whose business it is to deal almost constantly with boards of education, superintendents, principals, and teachers, speaking recently of the relation of the teacher to the board of education, said: *"The teachers can come into their proper relation with the board of education only when principals and superintendents discuss school problems and policies with them freely and*

frankly, without any special reservations, and then lay before the board of education the judgments of the teachers. Any school policy which ignores the opinion and wishes of the teaching force, and in which the teachers have little voice or none is an un-American and undemocratic policy, and in the end must fail."

Boards Must Aid Teachers

There is sometimes a tendency on the part of boards of education to become so engrossed with the purely business aspects of school operation that they become materialistic in their conception of the schools, coming to regard them as so much educational machinery to be operated. A school is a living thing. Teachers are not mechanics. Schools have machinery, but schools are not machinery. It is not enough that the board shall deal merely with the means and instruments of education, however efficiently. All comes in the end to the teacher and pupils in the classroom. If the work and conditions there are excellent, little else matters; and if the teaching being done there is not good, everything else is but so much waste motion. So, if teachers are burdened with too heavy a teaching load, the board should know it; if reports and clerical routine are such as to interfere with the best work of the teacher, the board should know it; and if work of superior excellence is being done in any department, or any classroom or any school, that should come within the compass of the board's interests and attention. That is, the happiness and effectiveness of the teacher and the pupils in their work should be a major interest of every board member. The human element in school management and control is too vital to be either minimized or ignored.

Finally, if the members of boards of education are to bring to the consideration of school problems, policies and relations that larger knowledge and outlook needed in the management of school affairs as nowhere else in our civic life, they will take means to keep themselves informed as to what is being attempted and accomplished in the schools by other boards of education in other places and throughout the entire country.

opinion that they might borrow the money needed for the completion of the building, and vote and levy same later, when the district indebtedness had been sufficiently reduced so to permit.

Without further investigation of the legal question involved, the directors, it appears, borrowed \$11,500 on their personal credit, which was all used in the completion of the building. Upon completion, the school district took possession of and proceeded to use the building for school purposes, but when the directors sought reimbursement for their personal outlay advanced they were denied recovery.

In due time then, the directors filed suit in equity seeking a judgment against the school district for the amount they had in good faith advanced. Upon the trial of the cause, the lower court found the issues in favor of the school district and dismissed the directors' cause of action. From this the latter appealed to the higher court and here, after a review of the facts as they have been outlined, the court reasoned as follows:

Directors Held Mere Volunteers

"It is manifest that, at the time (the directors) procured and furnished the \$11,500 to complete defendant's (school district) school house, defendant was without power to incur a single dollar of additional indebtedness for that purpose. Indeed, it was expressly prohibited from doing so. . . . It could not, therefore, in any manner or form, have bound itself by express agreement to repay the \$11,500, or any part of it, even if every taxpayer in the district had assented thereto. And where the law prohibits the making of an express promise, it will not imply one.

"All of this (the directors) knew, or are conclusively presumed to have known, notwithstanding anything the state superintendent of schools may have told them. It does not appear, however, that he advised them to the contrary. It seems that he merely gave it as his opinion that the district, after its indebtedness had been reduced to the extent of \$11,500, could voluntarily, if it so elected, vote a sufficient levy to reimburse them. . . .

"In taking their own funds and building the second story of the schoolhouse and installing a heating plant therein, . . . (the directors) were volunteers pure and simple, and it is well settled that a court of equity will not aid a mere volunteer. Their position is analogous to that of one who voluntarily goes upon land in which he has no interest, and with full knowledge that the title thereto is in another makes improvements of a fixed and permanent character, without the consent of the owner. In such case the improvements become a part of the realty and vest in the owner of the fee, . . .

"(The directors), in using their own funds to complete the building of the schoolhouse, were actuated by laudable motives. Evidently they had the interest and welfare of their community very much at heart. It is to be regretted therefore that they should become the victims of their own misguided zeal for the public good. But no method of relief can be devised that will not amount to an evasion or nullification of a plain constitutional mandate. The judgment of the circuit court is affirmed." (316 Mo. 621, 291 S.W. 136.)

Caution Needed

In the light of the facts and holding of the foregoing case, it is obvious that school directors, or others interested in the public welfare, should exercise great caution in making advancements to school units that have reached their limits. They may, or may not, be entitled to enforce reimbursement thereafter, depending upon the laws and the court holdings of the state involved.

(Concluded on Page 136)

Right to Reimbursement of Persons Advancing Money for School Building

Leslie Childs, Ll. B.

Not infrequently school directors find themselves in deep water financially, perhaps with unfinished improvements on hand, but powerless to raise additional money in the usual way because of constitutional or statutory debt limitations. The question then, whether interested third parties may safely loan the school district money, with assurance of reimbursement when the financial situation clears, may easily arise.

As may be expected, this point has been before the courts upon a number of occasions, and, by the weight of authority, persons making loans for strictly public-school purposes are protected. But — and here's the rub — this rule has not been universally followed, and some courts have denied recovery in cases of this kind, on the ground that the lenders were merely volunteers with no standing in court to enforce their claims.

Needless to say, here is a point of law that should not be overlooked by school directors, or other interested parties in situations of this kind. As an illustration of judicial reasoning that denies recovery for money so voluntarily loaned, the following decided case may be examined with interest and profit.

School Directors Advance Money

In this case the directors of a school district had about \$25,000, the proceeds of two bond issues, for the purpose of erecting a much-needed school building. With this money they began the erection of the building in accordance with the plans and specifications furnished them by an architect. They did not let a contract for the building, but bought and paid for labor and material as required.

Owing to the rapid and unprecedented rise in the cost of labor and materials during the progress of construction, the funds in hand were exhausted when the building was about two-thirds completed. And, owing to a constitutional limitation, the power of the school district to incur indebtedness was completely exhausted when the original building fund of \$25,000 was obtained by bond issue.

The building as planned was required to meet the reasonable needs of the school district; there was no waste or extravagance in its construction; it could have been completed according to the plans, save for the unexpected rise in prices. The directors consulted the then state superintendent of schools and he expressed the

Teamwork in the Running of an Elementary School

Supervision From the Teacher's Point of View

Julius E. Warren, Superintendent of Schools, Lakewood, Ohio

Many of us are so far removed from the farm in the United States that the metaphor *teamwork* is almost exclusively applied to games. We are more than likely to forget that *teamwork* is a metaphor. Literally, *to team* means to harness together for hauling. Teamwork then means two or more animals harnessed together to work, to haul. Haul is a good old Anglo-Saxon word, meaning not only to tug and to pull, but nautically speaking to change the course of a ship.

The first words in our title involve many leads in the running of an elementary school. There are certainly many more than two animals to be harnessed together; pupils, hundreds of them; parents and public more than that, and from then on in evervarying numbers, custodians, teachers, supervisors, board members, the superintendent of schools, and the driver of this particular team, the elementary-school principal. If, on the other hand we follow the metaphor implied by the meaning, *haul*, changing the course of the ship implies not only a moving vessel but a place to go, a destination crystal-clear in the mind of the pilot. Is this enough? How about the crew, the passengers, the owners of the vessel, the loved relatives and friends who have watched the embarkation, and how about those friends who wait anxiously on the other side for the arrival of the ship. Should not they too, know the destination, the objectives of this trip, and the character of the cargo?

Problems of a Typical Principal

The school year is in full swing. Since school started the elementary principal has been busy with routine and detail matters which are time- and energy-absorbing, even though she has delegated responsibility for many of them: medical inspection, discipline, requisitioning of supplies, issuing report cards, attending to absence and tardiness, and making weekly and monthly reports which she devoutly hopes somebody reads or at least sees. She has been helping some new teachers to follow the course of study, she has tested the achievement of the third grade in reading, spelling, arithmetic, or something, and in addition she has been turning over in her mind in the off moments of the day and the night those essential problems of improvement, growth, and betterment of conditions for her school for another semester or year.

The two grades in Miss Nelson's room trouble her almost as much as they trouble Miss Nelson. Is there any way of organizing her school for next semester so that this room with double grades can be relieved? There is the matter of the selection of the new textbook in English, with ten different books to read and score. There are various activities in each of these ten books to be tried out in different rooms in the building. In the back of the principal's mind always, and very much to the fore at other times, is that intriguing question of how she can show her superintendent that her needs have been clearly anticipated in the budget, and that those things she asks for will bring the greatest educational return to the children of her community. And how can she possibly be prepared to help that committee which is working on a revision of, say, the social studies, without having prepared herself by a definite study of some of the available literature in the field of social studies. Are these problems the *extracurricular* activities of the school principal, or are they a part of her everyday work? It is obvious that every principal, as she thinks over her individual daily and weekly program, will add details that have been left out in this

discussion for March, November, September or June, which furnish convincing evidence that running an elementary school is a real full-time job.

And, yet, it is certain that in this brief and hurried review of some of the activities of a typical principal, mention has hardly been made of the really big things in the life of the school, which are to make it a continuously better and more joyous place in which children are to work and to grow aright. Important and necessary as these details are, the success of a principal's work lies almost entirely in the kind of supervision of instruction that principal is capable of exercising, and the amount of time she habitually devotes to this work. Only through her supervision of classroom activities can she bring about real teamwork among the children and teachers with whom she associates. Creative supervision includes the direction of nearly all the educational activities of child and teacher. I like to think of supervision as a joint undertaking of supervisory officer and teacher, which creates in the mind of the teacher a desire to improve classroom instruction. This *desire* to improve must be coupled with the *will* to improve. When these two forces become operative in the mind and heart of the teacher, successful supervision is evident. This conception of supervision includes many activities other than class visitation. It means the preparation of teaching bulletins, planning for and conducting the professional teachers' meeting, aiding the teacher to secure desirable teaching materials, equipment and furnishing, conducting testing programs and providing pupil adjustments within the classroom as the year progresses. But, these things cannot be done intelligently, unless the principal knows her school and she cannot know her school unless she spends a large part of her time in visiting the classrooms under her direction.

Providing a Program of Class Visits

In many sections of the country, school administrators and boards of education are recognizing the importance of the work that the *principal* performs through class visitation, and are providing the schools under their direction with sufficient help so that the time can be found for a regular and intensive program of class visits. But even where assistants and clerks are provided liberally, the principal must watch her daily schedule carefully, in order that she may not be drawn into the handling of details which could be much better handled by someone else in the organization. There is but one way to organize one's time for this important work and that is to recognize its importance, and then hew out of the day and every day, time proportionate to the importance of the work, using this major fraction of the day for actual classroom visitation.

Having enough time for supervision is not enough to guarantee a good school. The fact is that for most of us it is the one thing in our work which we know least well how to do. Our own limitations confound us. The comment of a teacher who, in later years, was glad for a principal who knew how to teach better than she did, is the key to this situation. If we are not good teachers, if we have not taken time to know the method of reading step by step, the course of study in history, and the best way or ways in which to teach long division, we have little place in any supervisory scheme which is to result in improved schools. It is not enough to know general pedagogy, principles of teaching, school management, psychology, or

the history of education. These all help, but in themselves they do not furnish sufficient background of definite knowledge to justify the term expert supervision. They do not furnish enough authority to the principal to instill confidence in the mind of the teacher that the principal does know and can help. In 1913, Julius E. Warren, Sr., a member of the staff of the Massachusetts State Department of Education, writing on the subject of "Supervision of Teaching in Rural Elementary Schools" said, as I have not seen or heard it better said, "The Principal should gain a working knowledge of the details of teaching reading, writing, arithmetic, and other elementary subjects. He should not try to master at once methods in the many subjects of the curriculum. He is not expected to know them at the outset. He must acquire methods in these subjects, one at a time, and in the order in which he plans to emphasize them in his school. The first year, let him take one subject — possibly reading — talk about it in his teachers' meetings, give it a large share of attention in his visits and gradually raise the efficiency of the schools in this study. The next year he should take another subject. Each year while keeping the old work at a high pitch of efficiency, he will concentrate on some new line. He will thus gain in knowledge and capacity, and will also guide his teachers step by step — the only way in which they can grow in power, skill, and usefulness. Further, the principal must know children. He must be able to judge the work of the schoolroom by its effect upon the pupils." In spite of all the hopeful things that have been, and are being written, on the subject in the educational literature of today, supervision can justify itself only when teachers welcome it whole-heartedly and the standards of achievement in daily classwork show its effectiveness.

In some communities, there is a feeling of antagonism toward supervision and justly so. Not long ago a teacher in speaking in glowing terms of her principal, who had always seemed to be a rather forceless person, ended her remarks by saying, "I like Mr. H. very much. He leaves us alone." During Superintendent McAndrew's term of office in Chicago a printed circular was distributed among the teachers of that city which started out in this way, "Friends of Freedom should realize what he is doing. He sits in the back of the room and takes notes and then reads the notes to us." One of the teachers in our system said recently to a friend who had made inquiry as to how she was getting on in teaching, "I really don't know yet. I am being supervised so much that I haven't had time to really organize my school, and find out." But there is increasingly, I believe, another side to this picture. One teacher writes, "Mr. S. would very often drop in, and seating himself in the back of the room would listen to the recitation. He watched the reaction of the pupils, he knew whether they were interested, he knew whether that lesson was prepared, or whether the pupils were being given drink from a stagnant pool. There was never a lesson he saw taught which did not receive its share of attention and comment, whether favorable or unfavorable. Many a time have I wept in private when I had been told that I had wasted time, or that I had talked too much; or that my work had not been carefully prepared, or that I had made incorrect statements to my classes. I did not like it at the time, but I can assure you that it has made a more careful, conscientious teacher out of me. I learned to look forward to hearing at the end of the day, 'That was a good lesson you pre-

sented this morning.' A favorable comment from him meant much to all of us, for we knew it came from one who could teach far better than we could."

Antagonism on the part of teachers, patrons, and school-board members can be overcome, if supervision is intelligently and tactfully practiced by competent people who are more than competent executives. Whatever temptation there may be on the part of a supervisor to exercise it, autocracy must be eliminated. Coöperation, a term, somewhat overworked perhaps, is a matter of giving, giving on both sides, as well as getting. To secure coöperation the supervisor must be ready to go much more than half of the way. He must request and suggest, rather than command. He must never be hasty or hurried in his judgment. There will ever be some fields of subject matter and method in which he must enter the classroom as a learner in a humble way. If the teacher knows, and she should, that he does come as a learner, there is a basis for a valuable conference in which principal's and teacher's rôles are reversed. The supervisor in this situation may learn the lesson, if he will, that he cannot be concerned with "my way" of doing the thing that is to be done; he must rather be concerned with helping the teacher in "her way."

The Purposes of Supervision

During the school year 1928-29, the supervisory officers of Lakewood, Ohio, devoted their professional meetings to a consideration of the problems of supervision in this city. Out of their discussions was evolved the following series of principles of supervision. These were issued in bulletin form to all the teachers of the city. The purpose of this statement was to define the position of the various supervisory officers and to establish working principles which should make the program actually one of coöperative supervision.

I. The principal as representative of the superintendent is the chief supervisory officer in his district.

II. The principal conforms to the general policies of the administration and to the advice and suggestion of the supervisory staff. He does this not because the mandate or the plan is holy in that it emanates from the superintendent or the board of education, but because he is part of a system of schools devoted to the education of all the children of the city, and equal educational opportunity and facilities are intended for all children in the city.

III. The principal is the responsible head of the school. He may initiate and should lead in the organization of his building, in matters of detail, in the direction, leadership, supervision of teachers, and of classroom practice. He is free to carry out any program of experimentation which has the approval of the superintendent. He is always free to present ideas to the superintendent.

IV. The supervisor is a member of the superintendent's staff and as such is responsible to the superintendent for the organization of the curriculum, and for assisting teachers in carrying out the curriculum effectively.

V. The supervisor is at all times the expert adviser of the principal of any given school.

VI. There can be no conflict of authority in supervision between the principal and the supervisor, if the curriculum is sufficiently elastic to provide for a statement of absolute minimum essentials, as well as abundant opportunity for enrichment in the various subject-matter fields. This enrichment of curriculum material will always permit the development of individual building projects, as well as the desirable and required activities of the curriculum.

VII. Supervision of instruction is conceived as any activity upon the part of the supervising officer, which creates in the mind of teacher a desire to improve classroom instruction. Suc-



W. CARSON RYAN, JR.
Director of Indian Education
Department of the Interior, Washington, D. C.

Mr. Ryan, who was recently appointed director of Indian Service for the U. S. Department of the Interior, was formerly professor of education at Swarthmore College. He holds the degree of A.B. given by Harvard University and the degree of Ph.D., from Washington University. He was formerly in charge of vocational education and statistics of the educational-survey commission of Saskatchewan, Canada, and was associate editor of *School and Society* from 1921 to 1927. He was in charge of the surveys of Santo Domingo, Porto Rico, the Indian schools, and the Virgin Islands. He was president of the National Vocational Guidance Association from 1926-27. Since 1921 he had occupied the position of professor of education at Swarthmore College.

cessful supervision is evident, when this desire upon the part of the teacher is coupled with the will to improve.

VIII. Supervision can only be effective when there is a clear understanding of the problem and of the entire situation in the mind of the supervised and the supervisor.

IX. The supervisor therefore must have objective evidence at hand. The supervised must also have evidence clearly in mind if the supervision is to bring about the desired end—improvement of instruction. This means that in the case of the conference with the teacher, the conference should not be delayed too long.

X. Supervision must avoid the personal and express itself in terms of educational principles. Supervision is a technical science as well as an art.

XI. Supervision should, when possible, recognize the good things in a teacher's procedure. Encouragement of teachers, as well as pupils, is of vital importance. There are classroom situations, however, in which one cannot point out something good. A sense of utter discouragement is sometimes the mainspring which brings about real improvement of teaching. A supervisor must be honest, sincere, and downright in any professional conference with a teacher.

XII. Corollary to this, the teacher's initiative and freedom, within the principles of this statement should not be curtailed. Individual differences in teachers should be recognized. The relationship between principal and teacher, therefore, should be such that the teacher feels free to present ideas to the principal.

XIII. The outcome of a conference on supervisory activity should be clear to supervised and supervisor, at the end. There must be no possibility of a misunderstanding.

XIV. In case of failure or disagreement the supervised teacher, as well as the supervisor, has recourse to the superintendent.

A Year's Trial

During the school year 1929-30, these principles have served as a basis of discussion among the teachers of all school buildings. Some

buildings have devoted two meetings to the subject, others more than that. In all cases the teachers appointed their own chairman and carried on their discussion with the principal and other supervisory officers absent. At the request of the superintendent of schools, they have submitted their written comments, many of them unsigned, and not bearing the name of their school.

In general, there was almost universal agreement and acceptance of the principles as evidenced by the constant appearance of such comments as: "The bulletin 'Certain Principles of Supervision' is in accord with my own opinions. The ideal conditions implied in that bulletin are difficult but not impossible to attain." "The general theories of supervision mentioned are fundamental." "The principles are excellent and most helpful."

On the other hand, there were specific points upon which teachers registered disagreement with the principles as stated. The comments of the teachers are presented in rather complete detail, because they reinterpret the principles as set forth and furnish a basis for a restatement that is very much stronger than the original. Where the original statements are left purposely generalized the teachers' comments become specific and definite. The comments indicate unquestionably that the 415 teachers represented in this school system are anxious to participate in a program of improvement of school conditions. There is very little evidence of a fear of supervision. Teachers do want help. Their comments are grouped under five heads:

- I. Specific points of disagreement.
- II. Relation in supervision between principal, supervisor, and teacher.
- III. Duties of the supervisor in supervision and suggestions for making supervision of greater value.
- IV. Duties of the principal in supervision.
- V. The teachers' responsibilities in the program of supervision.

I. Specific Points upon which Teachers Registered Disagreement with the Principles as Stated.

A. Almost unanimous objection was made to section XI, "Supervision should, when possible, recognize the good." Teachers object to the "when possible" in the first sentence, feeling that it is a rare case indeed in Lakewood to find a teaching situation so bad that there is absolutely nothing good about it that can be recognized. Moreover, to permit a teacher to reach the place where she is utterly discouraged is evidence of destructive, rather than constructive criticism and supervision. Real improvement cannot take place in a teacher who is "utterly discouraged." The responsibility of the supervisor in cases where there are many weaknesses to be overcome and little to build on is for the supervisor to take charge and show the teacher what is to be accomplished, and how it should be accomplished. The feeling seems to be that the ideas in this article are expressed a bit too drastically, that it needs rewording, modifying, that a fairer statement would be something like this: "a realization of shortcomings is often the beginning of a desire to improve."

B. The criticism is made that Article IV, "The supervisor is a member of the superintendent's staff," etc., does not clearly enough define the present generally accepted status of supervision. The first sentence should be corrected to read, "The supervisor is a member of the superintendent's *advisory* staff." And there should be added, "The supervisor is not an executive except when specially delegated by the superintendent to some piece of executive work."

C. Article II. "The principal conforms to the general policies of the administration and to the advice and suggestion of the supervisory staff," etc., weakens the position of the principal and is contradictory to the present concep-

tion of the function of the principal. This statement implies that the principal does no original thinking on her problems, or on the problems of the system. The principal should be a member both of the superintendent's executive staff, and of his advisory staff. Her close relation to the immediate community in which she works, and her intimate knowledge of building problems relating both to teachers and pupils, should give her a voice in formulating many of the general policies of the system. Her position as chief supervisor of instruction in her building should place her with the other supervisors of the system on the advisory staff of the superintendent.

D. Article VI. The conflict between principal and supervisor is not that of curriculum but rather that of misunderstanding the function of each position. Restate Article VI: "There can be no conflict of authority in supervision if there is a proper understanding of the functions of the principal and the supervisor and if the relation between them is one of mutual friendliness and respect."

E. Article X. The definition of supervision is not broad enough. It should be conceived as any activity upon the part of the supervising officer which sees a need, which arouses the desire of the teacher, and which points the way to the improvement of instruction. Successful supervision is evidenced by improvement in instruction, by new attitudes on the part of the teacher and by the growth of the pupils.

II. Relation in Supervision Between Teacher, Principal, and Supervisor.

A. The successful operation of a school system involves the organized effort of a number of individuals toward a common end. Centralized authority working through intermediate officials is the only known method of insuring economy of school administration. Organization of the school system and proper delegation of authority alone will not produce, however, the desired results in education. They must be accompanied by an attitude between supervisors, teachers, and principals of sympathetic coöperation, mutual appreciation of effort, mutual respect for opinions and achievements, an attitude on the part of all of openmindedness, sincerity, fairness, and an understanding of the problems faced by others.

B. The principal is the chief supervisory officer in his school. Consequently, he must know the supervisor's objective and her methods, well enough to assist teachers in carrying them out. He must also keep in touch with classes well enough to assist the supervisor in her less frequent visits in forming accurate judgments regarding teacher and pupil progress.

C. In fostering the desired relationship between supervisor, teacher, and principal, there are certain fundamental principles which the supervisor must religiously observe:

1. While she is the expert adviser of the principal, she must accept and act upon the practical advice of the principal.
2. She should always consult with the principal of the building before visiting teachers and should in all cases be sure that the principal is aware not only of her presence in the building, but also of the reason for her visit.
3. Each visit to the building should involve a conference with the principal to discuss the findings of the visit and the action, if any, that must be taken as a result.
4. In all cases, criticisms should be discussed with the principal before they are carried to higher authorities.

III. Duties of the Supervisor and Suggestions for Improvement in Supervision.

The teachers were particularly fertile of comment on the duties of the supervisor and on suggestions for improvement of supervision. Their ideas are excellent and varied. Supervisors should certainly be aware after studying this formidable list, if they never have been before,

of the magnitude of their job. An attempt has been made to organize these ideas under different topics, though this organization cannot be clear cut, for the same idea might easily appear under any one of several different heads.

A. Duties of Supervision in Regard to Curriculum.

1. The supervisors should provide for teachers more definite outlines of work, more definite statements of immediate aims, and the means of attaining them.
2. She should assist in working out better correlation between grades, such as kindergarten and first grade, or sixth and seventh grade, and between subjects within a grade.
3. The curriculum should, however, provide opportunity for the teacher to use her own initiative and it should be flexible enough to permit the teacher to include building activities and projects.
4. The substitution of new methods for old, or a change of method to suit a particular situation is part of the supervisor's responsibility.

B. Duties in Regard to Equipment.

The supervisor's duties in regard to equipment and its use are:

1. To assist teachers in planning room arrangement and in improving the appearance of their rooms.
2. To provide teachers with new equipment and suggestions for new equipment, reference material, libraries, museums, various types of materials for pupil activities, and to assist them in the proper use of available equipment.
3. To make proper allowance in judging the work of teachers for the lack of proper equipment or undesirable working conditions.
4. To equalize educational facilities and materials for all children in the school system.

C. Meetings.

1. There should be included in supervisors' meetings more model lessons and demonstration teaching to illustrate educational theories and methods.



MR. C. L. KULP,
Superintendent of Schools,
Ithaca, New York

Mr. C. L. Kulp, who was recently elected superintendent of schools of Ithaca, New York, to succeed the late F. D. Boynton, was formerly assistant superintendent. He received his common-school education in the schools of Rochester, graduating from the Rochester High School and the University of Rochester. He was given the B.S. degree by the University of Rochester, and during the past school year was awarded the Master of Arts degree by Cornell University.

Mr. Kulp entered the school system of Ithaca in 1920 as director of vocational education, and in 1922 was made director of summer and evening schools. In 1923 he was appointed principal of the Ithaca Junior High School, and later became director of elementary education. In 1927, he was appointed assistant to the superintendent, the late Mr. Boynton.

Mr. Kulp is an active member of the Department of Superintendence and a frequent contributor to the educational periodical literature.

2. Meetings should also include over a period of time a variety of things such as displays of seat work and displays of pupil activities. They should be instrumental in improving teaching technique; they should inspire professional growth among teachers.

D. Responsibility to Teachers.

1. The supervisor should feel responsible for knowing absolutely the mental standing and the educational background of every teacher's group in order that her basis for judging results may be fair to teachers and pupils alike.

2. The teacher's results should be judged over a long period of time, through the use of objective evidence and measures properly weighed, not on a basis of brief visitation evidence.

3. The supervisor has a responsibility for developing self-confidence within the teacher through commending her for things well done and for developing in the teacher the power of self-direction. The teacher who has been helped to analyze her own difficulties and apply the needed remedies is best able to improve.

4. Supervisors should face situations honestly with teachers and should point out definite means by which the teaching can be improved. Criticism should always be practical and constructive. A deficiency should never be pointed out without suggesting a suitable remedy. It is perhaps needless to add that the supervisor's manner in handling all criticism should be tactful and considerate.

5. Teachers may be unaware of mannerisms, of specific teaching difficulties such as: lack of skill in making assignments, in drawing all pupils in the class into discussion, in questioning, or a tendency to do too much talking herself, which are perfectly obvious to the visitor in her room. Supervision should concern itself with assisting teachers to overcome these difficulties.

6. Bulletins prepared by supervisors on classroom management as a result of their observation would help teachers to avoid errors. These bulletins should, of course, be constructive in character and free from all personal references.

7. Supervisors should not expect teachers to do anything they themselves cannot do or do not wish to do.

8. She should be ready to give model lessons for individual teachers, for as one teacher has expressed it, "I could learn more by observing her teaching for fifteen minutes than she could tell me in an hour."

9. She should act as expert adviser to principals and teachers and should so manage her program that she is free to assist teachers at the time they need her help.

10. She should aid by her leadership and inspiration in keeping up the morale of the teaching body.

IV. Duties of the Principal in Supervision.

A. Classroom Supervision.

1. He should know the details of the curriculum for each field and should know whether or not the department has the materials necessary to carry out the curriculum.

2. Frequent visits should be made in a spirit of helpfulness and kindly coöperation during the semester.

3. During these visits the teacher should be permitted to conduct the class in her own way.

4. He may in his capacity of supervision, teach the class to demonstrate good teaching practice.

5. If the principal judges by classroom results that the work is not being well done, and if he feels unable to help the teacher (as in some special subject) in a definite constructive way, he should call in the supervisor of that work to give expert advice.

6. He should supervise the giving of objective tests to determine effectiveness of teaching and advise about grading and standards.

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The Surplus of Teachers: an Administrative Problem

W. C. McGinnis, Ph.D., Superintendent of Schools, Perth Amboy, N. J.

No other problem of educational administration has received such unsatisfactory and unscientific treatment as the problem of surplus of teachers. In spite of the fact that most cities have large numbers of unplaced trained teachers, there are many educators who solemnly declare that there is no real surplus of qualified teachers. State departments of education are increasing the number of years of training required for graduation from normal schools, but the whole history of teacher training indicates that such action will only temporarily reduce the number of graduates. A study of supply and demand and the curtailment of the number of teachers in training are common-sense methods of meeting this problem that seems to be ignored.

The Professional Attitude

The New England Association of School Superintendents recently adopted a resolution as follows:

"Whereas there is a surplus of candidates for admission to the teaching profession, and whereas some of these prospective teachers are poorly fitted by nature or otherwise for this important occupation, be it resolved that normal schools and colleges of education, in coöperation with superintendents of schools, be urged to establish higher standards for admission and graduation, with special reference to the mental qualifications and teaching ability of students who intend to enter the teaching profession."

Note these terms in the resolution: "surplus of candidates," "prospective teachers," "poorly fitted," "mental qualifications," and "teaching ability."

In a recent interview, published in the *New York Times*, Mr. Clyde R. Miller, director of the Bureau of Educational Service of Teachers College, Columbia University, stated that while there is an oversupply of persons seeking teaching positions, there is a shortage of qualified teachers for positions in progressive school systems.

Here again, note the terms, "persons seeking teaching positions," "qualified teachers," and "progressive school systems."

The foregoing quotations do not represent isolated cases. Citations of similar cases could be multiplied indefinitely. Why is it that educational administrators refuse to admit that there is a surplus of teachers? And why clothe the problem with the magic cloth of confusing terms?

The Situation Statistically

According to a statement from the United States Office of Education, in 1925-26 approximately 890,000 teachers were employed. There were enrolled in regular sessions of training schools 304,000, a total of 1,194,000 teachers and prospective teachers in training. For the same year there were 789,000 teaching positions in public and private schools. The 304,000 in training institutions did not include the thousands in liberal-arts colleges who go into teaching after graduation.

During the present summer in a check-up on teacher supply, the United States Office of Education sent an inquiry to 21 states representative of the whole country. Fifteen reported a surplus of teachers based on records in the state offices. Three states — Delaware, Minnesota and Missouri — did not answer the question.

The resolution of the New England superintendents is timely, but if its implications are correct it is an indictment of the administration of teacher-training. Hasn't the public a right to

believe that graduates of public and accredited teacher-training institutions are *qualified* teachers? Hasn't the public a right to expect that these "persons" or "candidates" or teachers, who hold diplomas and certificates based on education, training, and successful practice teaching, do possess "teaching ability" and "mental qualifications"? If any large per cent of trained teachers do not possess these qualifications, then it is high time that the administrators of teacher-training shall recognize that fact with all its implications.

The surplus of trained teachers constitutes a serious problem in teacher training and in public-school administration. The statements of educators that this surplus is not a surplus of "qualified" teachers seems to be an attempt to evade the problem. Is the statement that no surplus of qualified teachers exists a true statement? If so, then the thousands of trained teachers who are without positions and the public that has paid for their training are betrayed in the house of their friends, the administrators of teacher training.

THE OLD WASHINGTON SCHOOL OF ALEXANDRIA, VIRGINIA

A. C. Monahan, Formerly U. S. Bureau of Education

The Old Washington School, of Alexandria, Virginia, will take on a new interest with the opening of the Mount Vernon Boulevard, now under construction from Washington to Mt. Vernon, as this new highway will pass directly by it. The school, in continuous use as a free public school for 145 years, is one of the interesting "relics" of George Washington on the new route from Washington City to the old home of the first president of the United States. It will be of more interest than some of the pres-

ent well-known objects along the route, such as Christ's Church, because relatively few people knew anything about it up till now.

This old school, the first free school in the State of Virginia according to generally accepted opinion, is a brick building supposedly erected as a dwelling-house in 1762, converted into a school in 1785, and used continuously as a free school from that date till now. It will probably be used for years to come as it is in good condition. This old school stands in the yard of an eight-room elementary-school building which is under the immediate charge of the principal of that building, the two being operated as a single school.

The building is unique in construction as a school building. It is three stories in height, with a single classroom on each floor, the rooms being about the size of present-day classrooms. The one on the first floor is entered directly from two doors, one on either side. The rooms on the second and third floors are reached by means of a stairway in a structure at one end of the building. This, according to tradition, was a one-story kitchen, an upper portion being added when the building was converted into a school. At the other end, a stairway has been erected as a fire escape. It is an ugly addition, which detracts from the appearance of the building, and it is hoped that it will be replaced with something more attractive.

The early history of the building is somewhat obscure, but agrees with the above according to the best local historians. When the building was made into a school, the interior walls and stairways were removed and outside stairways erected. The building is built of English brick, brought from England in 1762 as ballast in a tobacco boat. On both sides of the Potomac River are many colonial houses built of this "ballast brick" as it was called.

The school is known as the "Washington School," because its establishment was due to the efforts of George Washington. Soon after the Revolutionary War, Washington became impressed with the need of a free school for the poor white boys of Alexandria and the sur-

(Concluded on Page 131)



THE OLD WASHINGTON SCHOOL, ALEXANDRIA, VIRGINIA

Natural and Artificial Lighting of Schoolrooms

Geo. M. Hopkinson, Architect, Cleveland Board of Education

The natural and artificial lighting of a schoolroom has very seldom been considered in combination. True, a certain amount has been written on the subject of the proper amount of glass area to be provided in the exterior walls, and many state laws have fixed various amounts. A certain amount has been written and a great deal of research work has been done in connection with artificial lighting, but in spite of all this there is no general agreement country-wide as to what amount of light should be provided, or in what form, kind, or manner a combination of the two would be most suitable for the schoolroom.

The subject is a most important one, and one on which there should be a more universal agreement, because depending upon the solution the pupils have to sit either in comfort or under strain at an age when their eyesight should have special care. The question is a complicated one because there enters into it such varying factors as extremely dull and extremely bright days, the personal equation of the operation of window shades, the increasing cost of the use of electric current in our school systems, the condition and treatment of the interior of the room, and varying exterior exposures.

The matter would be a great deal simplified if all could agree what amount of exterior glass area was proper and reasonable to take care of average conditions, and when exterior conditions began to darken, interior artificial light would automatically be supplied by means of electric light controlled by a photo-electric-cell device, and similarly when exterior conditions lightened the artificial lighting would automatically decrease. Unfortunately this method is not yet economically practical.

The foregoing solution indicates that at some time during certain days, it is necessary to augment natural day-lighting with artificial lighting and observation at any school will indicate that this very often becomes necessary, and in the opinion of the writer it would often be necessary even if one entire side of a classroom was entirely of glass without piers or window mullions or if classrooms were built like greenhouses.

What is Reasonable Natural Lighting

The greater the quantity of natural light furnished (within certain limits), the less will be the amount of electric current used, and therefore a saving results in operating costs. But why suffer the additional heat losses and the bad effect on the architectural design by providing every available square foot of glass area to provide for occasional days of extreme dullness? Also excess glass might result in glare on desk tops which is probably as detrimental to the pupil as deficiency in light.

There is a time when the artificial lights must be turned on and, if the artificial lighting is designed in accordance with good engineering

practice for night-school work, then from this time on during the duration of dullness it matters not what amount of natural daylight has been provided.

The question is, What amount of natural light should be provided in the exterior wall to give a reasonable light intensity on the desks along the extreme wall of the room on a medium dull day without the aid of artificial light?

If the intensity of the light on the desks should be based upon tests made on an extremely dark day, too much natural light would be provided, resulting in additional heat losses, glare and aesthetic restrictions. On the other hand, should the intensity be based upon tests made on a bright day, too little natural light would be furnished resulting in the use of excess electric current.

The question then appears to be a matter more or less of judgment as to what constitutes a medium day and also what constitutes reasonable light intensity on the desks along the wall. There seems to be quite a difference of opinion as expressed in the various state codes as to what amount of natural light should be provided and where the state codes do agree in this respect the reason is probably on account of the copying habit. We find 5 states require glass to be provided in the exterior wall equal to 16 2/3 per cent (1 to 6) of the floor area, 13 states 20 per cent (1 to 5) and 2 states 25 per cent (1 to 4) and the judgment of the writer after studying the subject and observing tests is that 16 2/3 per cent (1 to 6) or 20 per cent (1 to 5) are perfectly satisfactory and that 16 2/3 per cent (1 to 6) should be used as it assists very materially in allowing the building to be designed in proper architectural manner.

The difference between the minimum and maximum of the above percentages makes a great deal of difference in a classroom, and this difference can be very easily visualized by comparing Figure 1, showing windows proportioned for 16 2/3 per cent (1 to 6) of the floor area, and Figure 2, showing the windows proportioned for 25 per cent (1 to 4) of the floor area. It is very evident to the eye that there would be a great deal of difference in the amount of natural light admitted to these rooms.

The Writer's Investigation

The writer has been drawn into a discussion of this subject at this time due to the fact that the State of Ohio has had up for consideration the question as to whether or not it would be well to allow architects to reduce the amount of glass area in the exterior wall to as little as 12 1/2 per cent (1 to 8) of the floor area instead of 20 per cent (1 to 5) now required in Ohio so as to give more freedom in the architectural design of the building, making it possible to use smaller windows which certain types of architecture require. This change, however, required the addi-

tion of artificial light of a certain intensity within the room to make up for the deficiency in natural lighting.

Such a radical proposal called for serious consideration as to what amount of light, both natural and artificial, should be provided in schoolrooms, and the writer with the aid of Mr. Geo. A. Hausmann, chief engineer of the Cleveland board of education, set about to investigate the matter under actual conditions found in an ordinary classroom with the hope of making certain deductions, and this investigation appeared to be necessary due to the fact that very little information has been made available anywhere bearing upon this exact problem.

The investigation comprised the taking of a lot of scientific data, but the writer will attempt to explain the problem in readable language, citing only what would appear to be the most significant facts so as to avoid complications due to a scientific description overbalancing the practical and reasonable answer to be found.

The engineers of the General Electric Company, Nela Park Branch, kindly rendered assistance in the taking of readings to ascertain the light intensities under various conditions of glass areas and exposures.

A classroom with windows on one side was chosen on the third floor of a modern school building, with a very open eastern exposure, and tests which are the most pertinent for our consideration were made on April 15, 1930, which was a medium dull day typical of many days in Cleveland during the school term.

This room had a net glass area of 18 3/10 per cent (1 to 5.45) with the glass line 38 3/4 inches above the floor, the top of the glass extended to within a few inches of the ceiling, the ceiling height above the floor being 11 ft. 3 in., size of room 24 ft. by 28 ft. 10 in. Figures 3, 4, and 5 show elevations of these windows in this particular room.

The intensity of light on the desks along the wall remote from the windows was 9.1 foot candles (window ratio 1 to 5.45) and in observing the conditions, the writer was of the opinion that the teacher probably would switch the lights on under these conditions by force of habit, or psychological influence, on account of the fact that the sky was overcast, but not due to deficiency of actual light intensity which appeared sufficient. An examination of the other 8 rooms that were occupied in the building proved this to be a fact because 6 of these had the lights on, and the other 2 had not, probably due to the fact that in these 2 rooms no children were using the desks along the far wall.

Findings of the Test

The electric lights in the room tested were then turned on, and readings taken with a combination of the natural and artificial lighting with the result that 17.6 foot candles were observed.

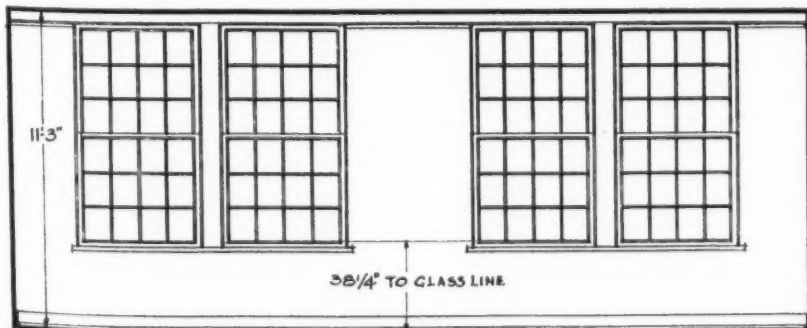


FIGURE · 1

GLASS AREA PROPORTIONED TO 16 2/3% (1 to 6) OF FLOOR AREA

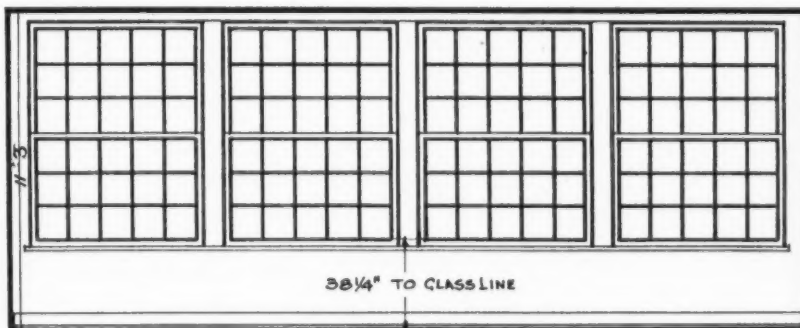


FIGURE · 2 ·

GLASS AREA PROPORTIONED TO 25% (1 to 4) OF FLOOR AREA

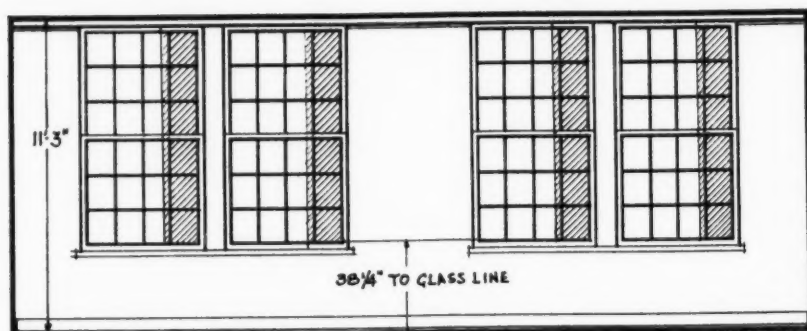


FIGURE 3

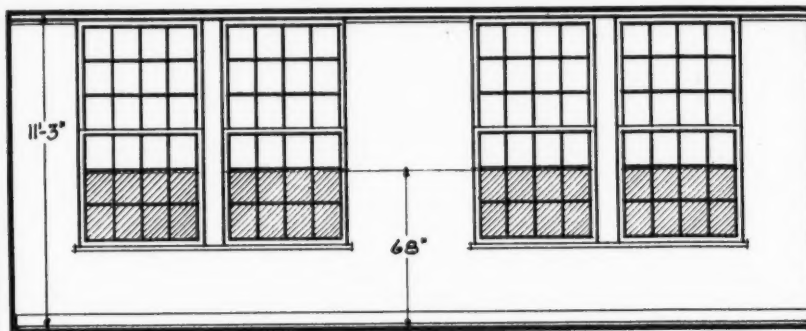
NET GLASS AREA $12\frac{1}{2}\%$ (1 to 8) VERTICAL BLOCKING OF LIGHT

FIGURE 4

NET GLASS AREA $12\frac{1}{2}\%$ (1 to 8) HORIZONTAL BLOCKING OF LIGHT

The artificial lighting in this room consisted of 6 outlets each equipped with 150-watt lamps inclosed in white opal glassware.

It was possibly the consensus of opinion among engineers up to just recently that 10 foot candles constituted pretty good lighting. However, they appear now to be on the point of advocating 12 foot candles, if they are not already doing so, but I question whether architects should go this far with them.

It will be noted in the foregoing that the natural daylight reading in the test room was 9.1 foot candles with a glass area of $18\frac{3}{10}$ per cent (1 to 5.45) on a medium dull day, if reasonable light intensity should be considered as 10 foot candles, it would not appear reasonable to reduce the glass area. However, as the electric lights were being used in the other rooms, the question was asked as to why not reduce the glass area still further, as the electric lights are used in any event, but the answer to this, of course, is that the use of electric current should not be encouraged, and it is certain that the smaller the glass area furnished, the sooner the electric lights will be turned on.

Had the window-glass area been 20 per cent (1 to 5), the engineers calculate the natural daylight reading would have been 10 foot candles and the reading with the combination would have been 18.5 foot candles. In my opinion, however, the electric lights would have been switched on by the teacher because the room was not bright, although the conditions were absolutely satisfactory for reading and studying without the electric lights according to our observation and practical reading test.

Regardless of the fact that the foregoing indicated that window glass should not be reduced below $18\frac{3}{10}$ per cent (1 to 5.45), further tests were made to see what would be the result if the glass were blocked with black paper to give the small area suggested by the state authorities, namely $12\frac{1}{2}$ per cent (1 to 8).

This was done in three ways: first by pasting on vertical strips (see Fig. 3), then by removing the vertical strips and substituting a horizontal strip along the bottom (see Fig. 4), then by using a combination of vertical and horizontal strips (see Fig. 5). The remaining uncovered portion of glass equalled $12\frac{1}{2}$ per cent (1 to 8).

Results of Light Blocking

The readings on the desks along the wall remote from the windows were as follows:

Figure 3 — $12\frac{1}{2}$ per cent (1 to 8) vertical blocking of light.

Natural lighting, 6 foot candles.
Combination lighting, 14.5 foot candles.

Figure 4 — $12\frac{1}{2}$ per cent (1 to 8) horizontal blocking of light.

Natural lighting, 7.3 foot candles.
Combination lighting, 15.8 foot candles.

Figure 5 — $12\frac{1}{2}$ (1 to 8) both horizontal and vertical blocking.

Natural lighting, 6.5 foot candles.
Combination lighting, 15 foot candles.

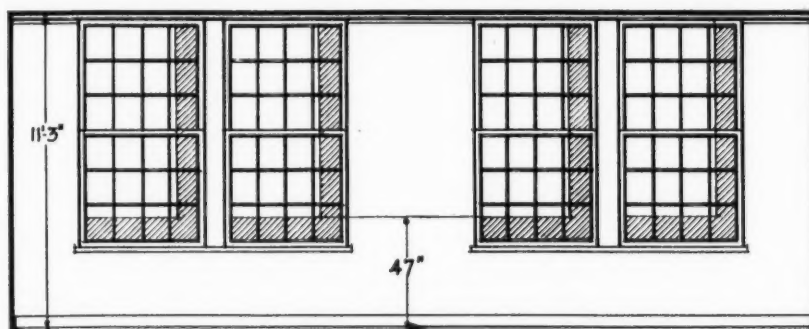


FIGURE 5

NET GLASS AREA $12\frac{1}{2}\%$ (1 to 8)
COMBINED HORIZONTAL AND VERTICAL BLOCKING OF LIGHT

It will be seen by the above that the intensity of natural light along the far-wall desks falls considerably below good-lighting qualities of 10 foot candles.

The system of vertical, horizontal, and combination blocking was used in the tests for the purpose of gathering information as to whether or not it is advisable to figure only glass area above a given distance above the floor for proportioning the glass area to the floor area, the assumption being that glass below a certain line does absolutely no good so far as furnishing light on desk tops along the far wall is concerned; and further where window sills are low, the desks along the windows are seriously affected by glare.

The above readings show that if the net glass area is kept constant, the far row of desks receive the most benefit when the bottom glass line is kept high, which indicates that while it would be possible to furnish a large glass area for a room, no additional benefit would be received by the wall desks if low window sills were used.

The above would further indicate that all laws should fix a point above the floor below which no credit should be taken for the glass area provided, and observation of these tests would indicate that it would be reasonable not to allow any credit for glass below a line located, say 36 inches above the floor.

All conclusions contained in the foregoing remarks that have been stated by the writer, of course, are subject to challenge and further discussion, and further scientific tests, but as this matter has appeared to lie dormant for so long, it is time that we try to arrive at some general agreement in the interests of the children and also for the sake of the architect who is striving for good architecture in school buildings. If the architects in those states where 25 per cent of glass is mandatory are adhering to the law, they certainly are working with a distinct handicap in trying to produce good-looking school buildings.

The Ohio Law

Further thought should be given to this question by all concerned and there is room for a great deal of study in connection with matters allied to this problem, such as window shades,

their design and regulation, location and design of lighting fixtures, other methods of natural lighting to keep in step with new methods in education and relative health values of natural and artificial light under practical classroom conditions.

The change made in the State of Ohio would appear to be quite important in connection with lighting of schoolrooms and what has happened in Ohio should be of interest to those in other states, as the problem is common to all.

The following is therefore given with a view to presenting the full facts regarding the lighting of schoolrooms in the State of Ohio. The Ohio State Law on OPTICS reads:

Section 12600-54. Optics. There shall be provided not less than one (1) square foot of glass area to each five (5) square feet of floor area in each class, study, recitation, schoolroom and laboratory and not less than one (1) square foot of glass area to each eight (8) square feet of floor area in each domestic science, manual-training room or shop. Each gymnasium, play, recreation and toilet room, shall have not less than one (1) square foot of glass area to each ten (10) square feet of floor area.

Windows shall be placed either at the left, or the left and rear of the pupils when seated, except in laboratories, drafting rooms, domestic science rooms, manual training or other rooms in which desks, benches, tables or machines can be placed to secure proper lighting otherwise. In no case shall more than fifty (50) per cent of the light be placed at the rear of the pupils when seated.

Tops of windows shall be placed above the finished floor line at a height equal to not less than half the average width of the room minus eight (8) inches. The width of the room shall in every case be measured at right angles to the source of light.

All windows shall be placed in the exterior wall of the building, except for halls, corridors, stock and supply closets which may be lighted by ventilated skylights or by windows placed in interior walls or partitions. Museums, libraries, art galleries, laboratories, drafting rooms, domestic-science rooms, manual-training rooms and shops may be lighted by skylights or clerestory windows.

The foregoing is the statutory law of the state, but deviation in effect may now be made from this law through a ruling just issued by the Ohio Board of Building Standards. The Ohio Board of Building Standards is a board created by law with powers to define equivalents

(Concluded on Page 135)

Old and New Principles of Salary Schedule Making

Discussion in Relation to the Providence Salary Schedule

A. J. Stoddard, Superintendent of Schools, Providence, Rhode Island

The primary purpose in making a new salary schedule for teachers, especially if it results in increasing salaries, is to provide better service for the boys and girls of the community and, therefore, richer returns on the investment by the taxpayers. Salaries should not be increased merely because teachers are more poorly paid than other professional workers with the same training and experience, nor because the salaries received are below the cost of living, nor because the salaries of teachers in a particular city are below the average paid in other cities of the same class, unless in addition to these considerations there results a proportionate increase in efficiency of service. In other words, teachers should be paid higher salaries, not because they are poorly paid and deserve more, but because better compensation should result in better service. It is not a valid argument that teachers in a particular community should be paid more simply because they receive less than the teachers in other cities of the same size. Schools are not maintained by society to provide positions, or better positions, for the teachers of the community. The taxpayer is entitled to expect that those charged with the expenditure of public funds will endeavor to get the largest possible returns for the money. If the salary budget for the schools in a city is increased by 5 per cent for the succeeding year, those in charge of the administration of such schools should accept the responsibility of securing a proportionate increase in the service rendered.

Better Service Criterion

The criterion that should be applied to any provision in a salary schedule should be the probability that it will tend, directly or indirectly, to produce better teaching service. The final question is not whether the provision is theoretically sound or generally approved, but whether in its operation it will result in better service. For instance, many educators believe in the rating of teachers and the granting of salary increases in accordance with such rating. Most people will agree that this is a sound principle, but whether it should be applied in a salary schedule for teachers depends upon the practical question whether it can be so applied and administered as to actually result in an increase in the efficiency of service.

It is a matter of common knowledge, although somewhat difficult to prove statistically, that any worker does his best when his morale is high. A salary schedule should contribute, so far as practicable, to such a condition. Teachers naturally will not do their best work if they feel that the community undervalues the worth of their services in comparison with those in other professions or those in the same profession in other similar communities. Everyone appreciates expressions of approval, but nothing can fully take the place of that most potent indication of approbation, an adequate monetary reward.

A salary schedule should be so designed as to encourage every teacher to work up to the level of her ability and also to inspire her constantly to desire further advancement. Any provision that promotes these objectives should result in better service to those who make the investment. Quality of service is very difficult to measure. The most that can be done is to bring about those conditions that have been found from experience to produce desirable results. The ability and the desire to render the best of service rank high in the list of those character-

A salary schedule without a maximum is an unheard of innovation in teachers' salary policies. In the present paper there is a description of an innovation in schedules more radical than the single-salary schedule. Any school-board member who reads the present paper will be convinced that this schedule as developed by Mr. Stoddard and accepted by the Providence, R. I., board of education, is based on sound principles and should result in increasing efficiency on the part of teachers who enjoy its benefits. — *The Editor*.

istics that may be promoted by the wise adjustment of salaries.

The Providence Schedule

If a schedule is to accomplish the purposes that have been outlined above, it should have certain definite characteristics and should be in accordance with definite accepted principles. In the discussion that follows, some of these principles are stated and discussed in application to the new salary schedule that became effective in Providence, September 1, 1930.

In recognition of the very important secondary objective in the making of a new salary schedule that it should promote a favorable attitude toward the schools on the part of both the teachers and the community, the following facts should be noted concerning this particular schedule: The study, resulting in the new schedule, was initiated by the Providence School Committee; a committee of classroom teachers, elected by and representing all groups of teachers, joined with the superintendent's staff in a six months' study of the principles and practices in salary schedulmaking and the formulating of the new schedule; the schedule was approved in group meetings, including all departments, and was finally submitted to the school committee as the product of democratic group action. It was adopted unanimously by the school committee and commended by the press and the public generally.

The first essentials of a good salary schedule are that it shall offer inducement to the best young people of the community to choose to enter the teaching profession, that it shall encourage them to remain in the profession, and that it shall stimulate constant and continued growth. There is, of course, a limit to the extent to which the schedule alone can accomplish these objectives, but it ought to be a very strong, positive influence toward doing so. It should provide an initial salary that competes favorably with initial salaries in other lines of work open to young people. It should provide a constantly increasing salary, if deserved, and should reward unusual training and proficiency.

The Minimum Salary

The Providence schedule provides that the minimum salary that can be paid to a teacher in the elementary schools is \$1,000, in the junior high schools \$1,200, and in the senior high schools \$1,400. However, it provides further that the beginning salary of any new teacher shall be determined by appraising the training, experience, and other qualifications and conditions at the time of the initial appointment. This provision makes possible the recognition of individual qualifications and the determining of the beginning salary on an individual basis. It also makes possible the securing of experienced teachers from outside sources.

Recognition of additional training or unusual proficiency is possible under a provision in this schedule which states that "in special instances teachers may be advanced, by authority of the

superintendent, to such a point on the schedule as will increase the salary \$100 beyond what it would have been for the following year, with normal procedure on the schedule from that point, provided that such action cannot be taken more than twice for any teacher nor oftener than once for a teacher in any period of three years." As these increases are granted, the teacher is advanced on the schedule permanently and profits accordingly for the remaining years of service. This additional promotion on the schedule can be granted at any time, and is not subject to the limitation of the usual super-maximum salary granted only to those of long experience. It seems much more logical and effective to grant recognition of unusual training and proficiency at any time during the service of the teacher than to defer it until the maximum salary has been reached.

The Special Allowances

In addition to the promotions on the schedule that may be made in the special instances described above, other promotions may be made in cases of transfer from one position to another requiring special qualifications and additional training. This plan is described in the two provisions quoted below:

a) If a teacher is transferred by the superintendent from a regular position in an elementary school to any one of the following positions requiring special qualifications and additional training, the teacher may be advanced to such a point on the schedule as will increase the salary \$100 beyond what it would have been for the following year, with normal procedure on the schedule from that point: demonstration schools, disciplinary schools, fresh-air schools, platoon schools, prevocational schools, schools for backward children, schools for crippled children, schools for sight conservation, and ungraded schools. If such a teacher is then transferred to a position included in a higher schedule, the teacher, at the beginning of the following school year, shall be advanced on the higher schedule one step beyond the present schedule salary, with normal procedure on the higher schedule from that point.

b) If a teacher is transferred by the superintendent from a regular position on one schedule to a regular position on a higher schedule, the teacher may be advanced to such a position on this higher schedule as will increase the salary \$100 beyond what it would have been for the following school year, with normal procedure on the higher schedule from that point. If a teacher is transferred from a regular position on one schedule to a regular position on a lower schedule, the teacher may be advanced to such a point on this lower schedule as will increase the salary two hundred dollars beyond what it would have been for the following school year, with normal procedure on this schedule from that point.

If the interests of parents and children are to receive proper consideration, there should be some provided in the schedule for dealing with the problem of the inefficient teacher. Inefficiency is easily detected by the competent supervisor, but very difficult to prove before a judge. No salary schedule can prevent nor remove incompetency. The most that it can do is to provide the opportunity to deal with it from a financial standpoint. What is done to make the provisions of the schedule effective depends on the professional fortitude of those charged with its administration. No rating plan is any stronger than the administration of the school system in which it is in effect. Any salary provision affecting the inefficient teacher merely makes it possible for the superintendent to deal with this vitally important problem to the extent that he has the will and the ability to do so.

Overcoming Inefficiency

Many who have had experience in administering schedules, designed to merely reward the unusually efficient, have learned that such schedules not only may have no helpful effect on the incompetent but may in some cases even increase inefficiency by lowering morale. The Providence schedule recognizes that a salary schedule should not punish the inefficient teacher, but should make some provision that may encourage the teacher to do better work. It usually is impracticable to discharge the inefficient teacher and more difficult yet to determine who should be discharged with such a teacher. This schedule offers the following plan for dealing with this problem that is present to some degree in every school system:

If it should be decided by the superintendent that the salary of any teacher should not be advanced according to the schedule, notice to that effect shall be given to such teacher, explaining the causes of such decision. If these causes are not removed during the ensuing school year, the salary of such teacher shall remain the same during the succeeding school year and thereafter until such causes are removed. When the causes are removed, the teacher may resume normal progress on the schedule at the beginning of the following school year.

This provision offers the opportunity to the teacher and supervisory staff to make a serious and coöperative effort, during the year of probation, to improve the situation. The very possibility of the notice may have a salutary effect. In school systems where the question of success or failure on the part of the teacher is accepted as the joint responsibility of the teacher and the supervisory and administrative staffs, the number of really incompetent teachers is relatively small.

Is There Maximum Efficiency?

Most salary schedules are based on the assumption that teachers improve gradually during approximately the first ten years of their experience, when they reach a plateau and continue there for the remainder of their professional lives. Some studies have been made that seem to indicate that, under certain conditions, many teachers reach their highest efficiency at approximately the eighth to tenth year of teaching experience. But it has never been demonstrated that such a situation is in response to any natural law. It may even be that the proposition is altogether false as a generalization because it is based upon other than objective measurement of the qualities that really determine success in teaching. The more logical assumption is that, if teachers generally do reach the height of their success after a period of about ten years, they do not remain on a plateau thereafter, but reverse the process and gradually revert to incompetency. If such is the case, salary schedules should not proceed from a minimum to a permanent maximum, but should gradually climb to an apex and then as gradually recede again.

Undoubtedly, there are some types of manual work in which the natural effect of age on the physical body would make the worker reach the height of his efficiency earlier in life. But teaching is a different type of work, dealing more with the spiritual and intellectual powers. Resembling the lawyer and doctor, the teacher becomes more valuable with the accumulated wisdom of years and should be able to postpone the beginning of the decline until very late in life. Perhaps salary schedules, with their maximum salaries set at approximately the tenth year of experience, instead of recognizing a situation that comes about naturally, really help to cause a cessation in the growth of the teacher. Or possibly the practice of fixing maximum salaries developed as the result of financial limitations. Whatever the explanation, it is submitted that the plan of starting teachers at a minimum salary and advancing them for a period

of years to a maximum is unsound in theory, and as a general practice has a tendency to limit growth in service. While it should be recognized at this point that many individual teachers are not affected one way or the other by salary schedules, on the whole, it is but human nature to respond, to a greater or less degree, to financial impetus.

No Maximums in Providence

The most unique feature of the Providence schedule is its plan of dealing with this question of a maximum salary. This plan is based upon the theory that most teachers improve rapidly during approximately the first ten years of service, and then continue this improvement more gradually during their more mature years. The plan is based on the assumption that such a provision in the salary schedule can at least contribute definitely toward encouraging teachers to make continuous improvement as their years of experience accumulate. In explanation of this plan, the three parts of the salary schedule are given below. Schedule A is the one that applies to teachers in the elementary schools, Schedule B to teachers in the junior high schools, and Schedule C to teachers in the senior high schools. It will be noted that no maximum is indicated on any schedule, and that the teachers may look forward to some increase through their years of service. The only exception to this is the provision in the schedule that, "the extended increases beyond the termination of the regular annual increases shall be granted to teachers who, in the judgment of the superintendent, have manifested continuous professional interest and proficiency." It should be the joint responsibility of the teacher, supervisors, and administrators to see that as large a proportion of the teachers as possible make continuous progress on the schedule.

Schedule A
Annual Salaries

Year of Service	1	2	3	3½*
Salary	\$1,000	\$1,100	\$1,200	\$1,300
4	1,400	1,500	1,600	1,700
7½*	1,800	1,900	2,000	2,100
11	2,200	2,200	2,300	2,300
15	2,300	2,400	2,400	2,400
19	2,400	2,500	2,500	2,500
23	2,500	2,500	2,500	2,500
2,500	2,500 and so on indefinitely as indicated, with the addition of one year for each succeeding salary level.			

Teacher Demand and Supply in the Public Schools—II

Teacher Tenure in the United States

Frederick L. Whitney, Director, Department of Educational Research, Colorado State Teachers' College

It is basic in any discussion of teacher demand and supply to know what length of service teachers return to the state after benefiting from a period of vocational preparation. The balance between the economic forces involved, may, of course, be maintained either by increasing enrollment and graduates in teacher-training institutions or by lengthening the total teaching experience in the state. The former is more or less a temporary expedient. Only when teaching becomes more truly professional, in the sense that a majority of the most competent teachers give long-time service, will the problem of demand and supply be solved in a satisfactory manner.

One measure for teacher tenure is found in annual turnover of the public-school faculty. This has been discussed in a previous article.¹ The writer knows of a small so-called system in a western state where the year's work was beginning two years ago with an entirely new high-school faculty, a new superintendent, and one half of the grade teachers new to the situation. A young teacher who did her first teaching there was surprised that, in the larger place where she now is, classwork begins so promptly instead of after a week or two of waiting for books and supplies and grouping about for daily programs.

But this is the extreme, one hopes, although N.E.A. studies have discovered yearly teacher replacements for all American public schools as high as 47 per cent in Wyoming, and as low as 5 per cent in Florida. In Colorado, the average figure is close to 10 per cent with many extremes both up and down, and with this as with many other educational data items of negative efficiency correlate highly with size of administrative unit.²

¹Whitney, F. L., "The Need of the State for New Teachers," AMERICAN SCHOOL BOARD JOURNAL, Vol. 81, p. 53, Sept., 1920.

²Whitney, F. L., *High School Opportunities in Colorado*, Research Bulletin No. 12. Department of Educational Research, Colorado State Teachers College, 1927.

Year of Graduation	Publicly Supported (Colleges and State Universities; Teachers; Colleges)	Privately Supported (Colleges and Universities; Teachers; Colleges)	Total (Colleges and Universities; Teachers; Colleges)	Per cent of Complete Returns
1923-24	55	146	201	58.8
1924-25	76	289	364	67.4
1925-26	78	440	518	86.0
Grand Total	208	875	1083	71.7

State	Publicly Supported (Colleges and State Universities; Teachers; Colleges)	Privately Supported (Colleges and Universities; Teachers; Colleges)	Total (Colleges and Universities; Teachers; Colleges)	Per cent of Complete Returns
Colorado	208	875	1083	71.7
Ohio	2019	3412(b)	5431	86.0

a. Buckingham, B. R. Supply and Demand in Teacher Training. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.
b. County and city normal schools and municipal universities.
c. Including kindergarten training schools, special schools, and Catholic schools.

TABLES III AND IV

1. Length of Previous Teaching Experience

Another check of teacher tenure may be made in terms of the actual number of years which any group of teachers have given to school office and classroom business. This may be illustrated by a tabulation in the state of Colorado, in which all of the newly appointed teachers for a representative school year were included.

First of all, a significant fact is found in the length of service which new teachers gave to the systems from which they have just come. This is shown in Table I, and furnishes a good measure of permanency. It is seen that, in first-class districts, these teachers had served on the average slightly over two years, and for the entire group of 542 the median was two years. Possibly this means, then, that the majority of these new teachers have just had their second promotion, having remained a total of about two years in two separate positions.

But it is more important to know the total previous experience of any group of teachers who are serving in the public schools. This has been ascertained for a group of over 300 as given in Table II. The original distributions showed the frequency columns to be very heavy at the bottom but to reach as far upward as a limit of 31 or 32 years, and this is indicated in the figures for total range (column 4). On the whole, women have taught nearly three times as long as men. In the original tables, teachers coming from outside the state were classified separately, and it appeared that they were invariably of longer experience than those newly appointed from previous Colorado teaching. This was true in particular for both men and women teachers in first and third-class districts. The total median experience there rising as high as 4.5 years.

But it will be recognized that there is a certain error present in the above figures, because of the fact that the groups of teachers included constituted not all public-school teachers, but only those who had been newly appointed for a single school year. However, it is thought that this error is not very large, as all kinds of "newness" were considered in the checking.

These included the following six types:

- Teachers with no previous experience.
- Teachers with previous experience outside of Colorado.
- Teachers with previous experience in Colorado but with an interval of six months or more between the teaching positions.
- Teachers coming from a teaching position in another community.
- Teachers who have changed rank in the same system; for example, from being a classroom teacher to acting as principal.
- Teachers who have changed to some other type of school in the same system; for example, from being an elementary-school teacher, to acting as high-school teacher.

2. Teaching Service of Teacher-Training Graduates

Another basis for checking tenure, which may obviate the possible discrepancy suggested above, will include as the group of teachers for examination those who have been prepared in the teacher-training institutions of the commonwealth.

This may be illustrated by data from the State of Colorado which reports the teaching service of the graduates of the seven public and private teacher-training schools of the state. This report gives the number of graduates of each of the last three years who were still teaching at the time the cards were filled out. Table III has these figures. It shows, for example, that 55 of the 1924 graduates of the State University and the Agricultural College were still teaching in the spring of 1926 and that 75 of the 1925 graduates were teaching. The totals (column 6) show that 246 of the 1924 graduates of all Colorado teacher-training schools were completing three years of teaching at the time of reporting and that there were 434 of the 1925 graduates still on the job. A comparison with the Ohio permanency figures is given in Table IV, but it is not so informative as the parallel

Year of Period	Colorado Number of Complete Returns	Colorado Per cent of Complete Returns	Ohio Number of Complete Returns	Ohio Per cent of Complete Returns
1. First	246	58.8	617	80
2. Second	434	67.4	869	83
3. Third	598	86.0	1139	84
4. Fourth	-	-	1819	87
5. Fifth	-	-	2598	92
Total	1278	71.7	7042	86

a. Buckingham, B. R. Supply and Demand in Teacher Training. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.

Years	Publicly Supported (Colleges and State Universities; Teachers; Colleges)	Privately Supported (Colleges and Universities; Teachers; Colleges)	Total (Colleges and Universities; Teachers; Colleges)
1923-24	45.8	46.6	46.4
1924-25	59.6	54.4	55.2
1925-26	54.9	63.4	62.0
Total	53.3	56.9	55.2

TABLES V AND VI

Group	Number of Teachers	Upper Quartile Point(Q ₃)	Median Point(Q ₂)	Lower Quartile Point(Q ₁)
1. First Class Districts				
a. Men	36	3.4	2.1	1.5
b. Women	153	3.7	2.3	1.6
2. Second Class Districts				
a. Men	24	2.3	1.7	1.3
b. Women	59	2.3	1.6	1.2
3. Third Class Districts				
a. Men	47	2.7	1.8	1.4
b. Women	224	2.4	1.7	1.4
Total				
a. Men	106	2.9	1.8	1.4
b. Women	436	2.9	1.9	1.4

Group	Number of Teachers	Years of Teaching Experience Approximate Median	Total Range
1. First Class Districts			
a. Men	21	1.7	1
b. Women	127	3.9	24
2. Second Class Districts			
a. Men	10	1.6	2.5
b. Women	58	2.0	15
3. Third Class Districts			
a. Men	14	4.5	18
b. Women	79	3.6	24
Total			
a. Men	45	1.7	10
b. Women	264	3.0	32

TABLES I AND II

TABLE VII

THE PER CENT OF THE TOTAL TEACHER GRADUATES WHO WERE TEACHING AT THE TIME OF REPORTING IN COLORADO ABOUT MAY, 1927, IN OHIO ABOUT JUNE, 1924 (a)

State	Publicly Supported		Privately Supported		Total
	Colleges and Universities	Teachers Colleges	Colleges and Universities	Teachers Colleges	
Colorado	53.3	56.9	56.2	59.8	56.7
Ohio (b)	70.0	79.0(c)	74.0	56.0(d)	70.0

a. Buckingham, B. R. Supply and Demand in Teacher Training. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.
b. Based on the last three years of the five year period.
c. County and city normal schools and municipal universities.
d. Including kindergarten training, special, and Catholic schools.

TABLE VIII

THE PER CENT OF THE TEACHER GRADUATES OF ALL TYPES OF INSTITUTIONS WHO WERE TEACHING AT THE TIME OF REPORTING BY YEAR OF PERIOD OF REPORTING, IN COLORADO, 1923-26, IN OHIO, 1919-23(a)

Year of Period	Colorado	Ohio (b)
1. First	48.0	62.1
2. Second	56.4	69.2
3. Third	61.6	77.3
Total	56.7	66.4

a. Buckingham, B. R. Supply and Demand in Teacher Training. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.
b. Based on the last three years of the five year period.

TABLES VII AND VIII

columns of Table V where the number of graduates of each year who had remained in teaching up to the time of reporting is given. Notice the ascending figures. In Colorado, they proceed from the 200 level through 400 to 600. In Ohio, they are 600, 800, 1100.

These tables seem to say that of the 872 graduates of 1924, for example, but 246 were found to be teaching at the time reports came in three years later. But it will be recognized that complete returns could not be obtained from all graduates. For that year they were but 58.8 per cent complete, and but 513 graduates were included. It will be safer to say, then, that, of 513 graduates actually reported for 1924, 246 were teaching three years later.

Statements like this for each type of institution and for each yearly graduating group are significant. For example, in the case of 313 graduates of state teachers colleges reported as graduating in 1924, but 146 are found in the classrooms of the public schools in 1926; and out of 75 private schools graduates only 45 taught three years.

The proportions of groups of graduates who survived as teachers in all types of institutions studied is shown in Table VI. It is seen that, of graduates of the State University and the Agricultural College who were reported, 45.8 per cent of the 1924 class were still teaching in 1926 and 58.6 per cent of the 1925 class. Of all three classes, a few over one half remained in teaching at the time reports were sent in. The contrast with Ohio efficiency as to length of service is striking (Table VII). There, from 60 per cent to 80 per cent of teacher-training graduates are found to be still in the teaching ranks at the close of a three-year period. In Colorado, there are nearly 60 per cent, and the range is from 53 per cent to 60 per cent. Table VIII gives a like checking for each of three years of reporting. In Colorado, there were found to be from 48 per cent for the first year to 62 for the last with a general level of efficiency in tenure of 57 per cent. In Ohio, the per cents range from 62 per cent to 77 per cent, and the total is 66 per cent. Evidently, teaching in Ohio has progressed farther along the road to a desirable professionalization so that on the average teachers are returning a longer term of service to the state. The general difference amounts to at least 10 per cent when length of service for three-year periods is computed.

TABLE IX

THE PROPORTION OF GRADUATES, WHO BECAME COLORADO TEACHERS, WHO WERE TEACHING IN THE STATE WHEN REPORTS WERE MADE IN MAY, 1926

Years	Publicly Supported		Privately Supported		Total
	Colleges and Universities	Teachers Colleges	Colleges and Universities	Teachers Colleges	
1923-24	63.2	69.5	67.7	71.4	68.3
1924-25	89.3	76.3	78.6	82.4	79.2
1925-26	97.5	90.7	91.7	94.1	92.0
Total	82.9	81.5	81.7	83.7	82.0

TABLE X

THE PROPORTION THAT THOSE WHO WERE TEACHING AT THE TIME OF REPORTING WERE OF THE NUMBER WHO BECAME TEACHERS IN COLORADO, 1923-26, IN OHIO, 1919-23 (a)

Year of Period	Colorado	Ohio
1. First	68.3	61.1
2. Second	79.2	67.7
3. Third	92.0	73.2
4. Fourth	-	82.5
5. Fifth	-	93.8
Total	82.0	79.8

a. Buckingham, B. R. Supply and Demand in Teacher Training. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.

TABLES IX AND X

Referring to Tables VI and VII again, it will be noted that when the length of tenure of public and of private teacher-training institutions is compared there are no striking differences found; and between the private level of efficiency and the lowest level among publicly supported schools (the State University and the Agricultural College) there appears to be a total difference of but about 6 per cent or 7 per cent. In Ohio, the balance of efficiency is the other way, the best publicly supported institutions doing at least 12 per cent better than the privately supported institutions.

The next logical step will be to determine what proportion of graduates who actually became Colorado teachers were still teaching at the time of reporting. It will be remembered, for example, that 150 of the 1925-26 graduates (over 15 per cent) did not teach at all. Further, but 650 of the 821 who taught accepted positions in Colorado. Further, but 598 of this group were teaching in Colorado at the time of reporting. Of the grand total of graduates, 2,012 taught and 1,558 taught in Colorado while 1,278 were on the job there at the time they reported. Table IX reports this fact for each of the three-year periods and each type of teacher-training institutions in Colorado. It will be seen that a grand total of 82 per cent of all graduates in a three year checking were still in the public-school ranks in the third year after graduating, and each other per-cent figure is read in like manner. The total percentage found for Ohio was 79.8 per cent. (Table X.)

An examination of the five total figures (Table IX) seems to show the teachers' college graduates at the bottom of the ranking, and those from private schools remaining in teaching longest of all. Very probably the two-year graduates from the teachers' college account for this, as many of them no doubt return to the college after teaching for a time to complete their bachelor course.

3. Conclusion

The foregoing discussion seems to point to the fact that, on the whole, teacher tenure in the public schools is a matter of but a few years of service given out of the life experience of the typical American teacher. The classical study in this field showed this for twenty years ago²

TABLE XI

THE LENGTH OF EXPERIENCE (APPROXIMATE MEDIAN) OF 1950 NEWLY APPOINTED TEACHERS IN OHIO (a) 1923-24, 655 IN VERMONT (b), 219 IN COLORADO, 1926-27, ALL ELEMENTARY TEACHERS IN WISCONSIN (c), 1922-23, AND IN THE UNITED STATES

Group	Median School Years	
	1	2
1. Ohio	5.6	
a. Cities		6.1
b. Villages		4.8
c. Counties		4.9
2. Colorado	3.4	
a. Men		1.8
b. Women		3.5
3. Vermont	4.2	
4. Wisconsin (Elementary teachers)	4.0	
a. Rural		2.3
b. State graded		4.2
c. Village		3.9
d. City		7.3
5. United States		
a. All Public Schools (d)		4.0
b. Rural Schools (e)		2.0
c. Superintendents of Schools (f)		3.0

a. Buckingham, B. R. Supply and Demand in Teacher Training. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.
b. Steele, H. K. A Study of Teacher Training in Vermont. Contributions to Education Number 243. Teachers College, Columbia University, New York, 1926.
c. Anderson, C. J. The Status of Teachers in Wisconsin. Department of Public Instruction, Madison, Wisconsin, 1923.
d. Keith, J. A. H., and Bagley, W. C. The Nation and the Schools. The Macmillan Company, New York, 1920.
e. Benson, C. E. The Output of Professional Schools for Teachers. Warwick and York, Baltimore, 1922.
f. Chadeay, C. E. and Others. The Status of the Superintendent. Department of Superintendence, National Education Association, February, 1923.

TABLE XI

and more recent investigations confirm the statement.⁴ Too few American citizens are making teaching a life career. There is still the hang-over of the colonial attitude that one or two years of teaching may constitute a stepping-stone to a more desirable and important permanent life business. Only in our older and better-organized systems are exceptions found to this bad generalization.

By way of summary, Table XI is given, and it is seen that the extreme range of teaching experience must be from a year or less (medians give but the central tendency of a spread) to less than ten years in most-favored systems.

²Coffman, L. D., *The Social Composition of the Teaching Population*, Contributions to Education No. 41. Teachers College, Columbia University, New York, 1911.

⁴Whitney, F. L., *The Growth of Teachers in Service*, The Century Company, New York, 1927.

BUDGET BUILDING

The building of a budget is not a matter for a few weeks of concentrated celebration on the part of interested departments. A well-balanced budget can only emerge as the result of careful and continuous analysis of fiscal and administrative facts. The derivation of unit costs, the analysis of teaching loads, the measurement of teaching efficiency of instructors, the preparation of building programs, the forecasting of future enrollments, and all of the other fact-finding procedures necessary to efficient financial administration should be coordinated.

Four basic principles summarize public educational finance policy: (1) Money should be expended through the guidance of a budget prepared in the light of detailed facts. (2) All finances should be accurately and completely accounted for through a system designed to show costs as well as use. (3) The facts concerning expenditures should be given the public in printed form so written and arranged that the layman can grasp them; the classifications of the financial report should be uniform for all public colleges within the state, and a national classification would be of great service. (4) Institutional needs and expenditures should be constantly under investigation in order that adequate, detailed, impersonal data may be available upon which to base legislative requests and internal finance policy.—Okla. A. and M. College.

The Faculty Helps the Principal

E. W. Jacobsen, Oakland, California

One of the chief duties of the professionally minded school principal is to evaluate and improve the instruction which is taking place in the institution for which he is responsible. To aid him in this important supervisory task, many tests have been set up for the measuring of classroom work and many devices, such as score cards and rating sheets, have been ingeniously arranged to aid in evaluating the teaching practice. Many suggestions have also been made for the conferences which the principal has with the teacher following classroom visits.

But who is to evaluate the practices of the earnest, professionally minded principal and point out ways whereby he may improve his work? Immediately one will answer that the

superintendent of the city or county or district, as the case may be, should do this. In the larger cities and towns where well-trained men head up the educational systems, much is done to improve the principal in his administrative and supervisory work. On the other hand, there are thousands of instances where the relationship between the principal and the higher officer is one of record and report-making, with the former on the making end and the latter on the receiving end. In many other cases, a principal may have, as his immediate superior officers, the members of a lay board of education who are not able and should not be expected to give professional advice. It seems only natural that there should also be some means of evaluation from *within* his organization.

How, then, is a principal to judge the effectiveness of his work? How can he detect whether or not he has developed little habits or weaknesses of which he may not be aware, but which may make his larger efforts wasted? A potentially big man often is held back by threads of weaknesses which others see so plainly but which are invisible to the offender.

One high-school principal has tried to solve this problem, although he did not lack competent help from above but rather desired to get a better picture of his effectiveness than the very busy and overworked superintendent's staff could give.

Generally speaking, the people who know a principal's work best are those who serve under

(Continued on Page 135)

RATING SCALE FOR PRINCIPALS

Worked out by Eugene Hilton, Jean Tuttle, Edith Hunt, E. W. Jacobsen, of Roosevelt High School, Oakland, California

NOTE TO TEACHERS: Following is a list of qualities that, taken together, tend to make any principal the sort of principal that he is. Of course, no one is ideal in all of these qualities, but some approach this ideal to a much greater extent than do others. In order to obtain information which may lead to the improvement of our school, you are asked to rate your principal on the indicated qualities by making a check (V) on the line at the point which most nearly describes him with reference to the quality you are considering. For example, under *Interest in School*, if you think your principal is not as enthusiastic about his school as he should be, but is usually more than mildly interested, place the check on the scale thus:

Interested in the classroom progress and all the school activities.	Seems mildly interested.	Takes very little interest.
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This rating is to be entirely impersonal. Do not sign your name or make any other mark on the paper which could serve to identify the rater.

Be sure to put your check on the line where you think it should be to express your judgment on the principal.

Professional Preparation and Growth

Thoroughly trained for his position. Continues enthusiastically his professional training.	Fairly well trained, but does little toward further preparation.	Has no professional training and does not attempt to get any.
--	--	---

Organization

So organizes his work that school runs smoothly on all occasions.	School runs smoothly most of the time.	Much confusion.
---	--	-----------------

Balance Between Administration and Supervision

Gives much time to helpful supervision.	Often involved in detail. Little time for supervision.	Allows details of administration to consume full time and energy.
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Supervision

Attitude inspires confidence. Many positive criticisms. Negative criticisms followed by helpful suggestions.	Many criticisms with few helpful suggestions.	Many nonconstructive criticisms.
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Stimulating Intellectual Attitude

Inspires teachers to investigate and study educational problems and methods. Creates desire for research.	Arouses slight interest in study of new problems and methods.	Discourages desire to investigate and experiment.
---	---	---

Approachability

Teachers and pupils feel free to talk over problems.	Teachers and pupils hesitate to ask for interviews.	Teachers and pupils avoid interviews when possible.
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New Ideas

Presentation to faculty: Carefully thought out before presentation.

Partly thought out before presentation.

Vague and indefinite.

Order of presentation: One new idea or method or experiment thoroughly established before advancing another.

A second plan advanced before the first is established.

Several new plans launched at same time.

Knowledge of Different Departmental or Subject Problems

Familiar with problems of each department or subject.

Familiar with most of the departments or subjects.

Familiar with only a few.

Attitude of Teachers Toward Principal

Teachers have full confidence in him. Regard him as a helpful leader and coworker.

Teachers accept his leadership, but lack enthusiasm. Some feeling of restraint.

Teachers fear him. He is dogmatic and tyrannical.

Sympathetic Attitude Toward Teachers and Students

Always courteous and considerate.

Tries to be considerate but finds it difficult at times.

Always sarcastic or "hard-boiled."

Fairness in Assigning Work and Extracurricular Activities

Absolutely fair and impartial to all.

Tendency to give more work to willing and capable.

Constantly assigns work to willing and capable, instead of bringing out timid, inefficient, or indolent.

Relations with Parents

Always courteous, considerate, and sympathetic.

Usually considerate and sympathetic.

Antagonistic; sarcastic.

Sense of Proportion and Humor

Always keeps proper balance; not overcritical or oversensitive.

Fairly well balanced.

Overserious; no sense of relative values.

Self-reliance and Confidence

Always sure of himself; meets difficulties with poise.

Fairly self-confident; occasionally disconcerted.

Hesitant, timid, uncertain.

Personal Appearance

Always well groomed; clothes neat and clean.

Usually somewhat untidy; gives little attention to appearance.

Slovenly; clothes untidy and ill-kept.

Personal Peculiarities

Wholly free from annoying mannerisms.

Moderately free from objectionable peculiarities.

Constantly exhibits irritating mannerisms.

Red Tape in Education

Harold Benjamin, Associate Professor of Education, Stanford University

The epithet, *Red Tape*, is a familiar one in educational circles. Pupils apply the term to classroom requirements, teachers level the charge at administrative officers, high schools accuse universities of the practice, and even laymen occasionally mutter hard words concerning school regulations.

One of the characteristics of a truly effective epithet is that the user shall have a clear and accurate concept of its meaning. A man who calls his fellow a liar or a thief ordinarily knows exactly what he means. He is able to define the terms employed in such a way that they can be applied to other instances of neglect of truth or of property rights. If he cannot furnish such a definition, his use of the expression is meaningless and unworthy of serious attention. It becomes merely a vague vehicle of chagrin or wrath, comparable to those exclamations uttered in the dark by one who stubs his bare toe against a lurking chair.

In the matter of alleged red tape in education, both accusers and accused often fail to recognize this essential qualification of an efficient epithet. The accuser is inconvenienced by the necessity of conforming to some rule of procedure; in annoyance he reaches for the *red-tape* argument as one blinded with rage might grasp the weapon nearest his hand. The accused, likewise, not knowing the true meaning of the charge, defends himself by general denial of all wrongdoing, or by citation of facts which have no bearing on the practice of red tape.

A Definition of Red Tape

The writer has been led to define this term on the basis of numerous observations of instances or purported instances of the phenomenon. He does not wish to appear in this discussion, however, as one of the righteous calling sinners to repentance. He would, instead, like the publican of old, beat his breast and call for mercy on his own transgressions in this respect. In some of the cases which he has observed, he was on the receiving end, in others on the sending end of indictments for red tape. Sometimes he was guilty of the practice, and at other times he used the term without proper regard for its implications. He offers the following definition, therefore, as one which has helped him to recognize the phenomenon and to avoid it in his own procedures:

Red tape is an aberration of management which occurs when attention is centered on procedures to the exclusion of objectives, with resulting rigidity and delay in action.

If this definition is correct, a person who would support the charge of red tape in any situation must be ready to do the following things:

1. He must indicate what the objectives of action are,
2. He must demonstrate that existing procedures do not fulfill the objectives efficiently, and
3. He must show that the reason for this lack of efficiency lies in an ignoring of objectives and a concentration on rules of action.

Thus inefficiency alone is not a characteristic mark of red tape. The procedure may not fulfill the objective, and yet the administrator may know clearly what the objective is, and he may be trying hard to reach it. On the other hand, moreover, the inefficiency may arise from the fact that no proper procedure is available for attaining the particular goal desired.

Furthermore, neither complexity nor rigidity is an infallible sign of red tape. To meet a particular objective, very intricate procedure or severe restrictions on actions may be needed. Many men have been called red-tape operators

when they should have been charged merely with inefficiency. Others have met the same charge because they *were* efficient.

In the light of these considerations, let us examine certain educational situations in which red tape is said to appear.

The Measure of Red Tape

One of the commonest complaints concerning red tape comes from teachers who rebel at some form of routine imposed upon them by the administration. Take the instance of the teacher who has to fill out a new form or initial a new pink slip brought by some pupil from the principal's office. To determine whether this new procedure is tainted with red tape is ordinarily a simple matter if the teacher will set himself seriously to answer the following questions:

1. What purpose does this new piece of machinery fulfill efficiently?
2. Is that purpose related to an accepted objective of the school, or is it related only to some other piece of machinery?

These are relatively simple questions. Their answers lead directly to a reasoned decision that the practice is either efficient management or red tape. Yet some critics of school administrators seldom bother even to *ask* these questions. They *see red* whenever they are confronted with a routine requirement. They are not concerned with what the device aims to do. They do not bother to determine how well it fulfills its purpose. It calls for systematic procedure — that is enough for them — and without further investigation they raise their wailing wolf-cry, *Red tape! Red tape!*

There are school administrators whose conduct in respect to this matter is equally indefensible. They have become experts in systems and devices, and such expertness, if not properly balanced by accurate and extensive knowledge of objectives, is a dangerous thing for any leader to possess. Some administrators like a pink slip for its own sake. They make a new one just for the joy of seeing it in operation, and they justify it on the same basis, "it works." They know and love all the intricate twists and turns of their procedures. They are not tangled in red tape; they wallow in it.

The red-tape administrators are by no means so numerous, however, as certain critics of our school systems would have us believe. The greater number of school administrators try to check up on their old procedures and evaluate new details of management by direct or indirect reference to the major aims of their organization. For such a task they may find it useful to examine in somewhat more detail the questions listed below.

1. Will the proposed procedure further the central purpose of the school system? Will it help to educate children better?
2. Will it aid this purpose directly, or only at second, third, or fourth hand?
3. What specific aim related to the main objective, will this procedure achieve?
4. Is there some simpler, more economical, or less exacting procedure which will attain the desired result with equal or greater success?

These questions are sometimes difficult to answer, but the efficient administrator does not shirk them. To proceed without answering them is to run grave danger of becoming a full-fledged red-tape operator.

Red Tape Versus Good Management

Recent protests against requirements for professional certificates offer excellent material for illustrating the difference between the efficient administrator and the red-tape operator, and

between the competent critic and the confirmed red-tape wailer. Let us consider the distinction as it applies to criticism of this phase of educational activity.

The competent critic, for example, holds that the true objective of certification requirements is to improve the quality of teaching. Suppose he finds that in practice some other objective is aimed at — the objective of keeping the teaching profession from becoming overcrowded, let us say. He may believe that the latter objective is an improper one, but he does not therefore curse the *requirements*. It is only when he finds the requirements being administered as something good in themselves, as a sacred and self-sufficient system that he is ready to apply the red-tape label.

In contrast to the competent critic, the confirmed red-tape howler attacks the requirements simply on the ground that they are hard to meet, that they are intricate, or that they possess other annoying characteristics. He does not bother with objectives. If one argues with him that present requirements fulfill a certain stated aim, he replies with a glassy stare that the requirements are red tape anyway. He means, of course, that red tape is any procedure which he does not like. If you suggest that any procedure should be made more intricate or rigid in the interest of efficiency, he convicts you of red tape without any further evidence. He does not go beyond procedures.

Thus we see that the red-tape howler is blood brother to the red-tape operator. Both have their noses glued so closely to the machine, the one in hatred and the other in love, that they cannot lift their heads even for a moment to look at the result of the process. They are often more than kin; they are identical. The teacher who shouts the accusation of red tape most fiercely in respect to certification requirements, simply because they are hard to meet, is often the one who has pupils put in their time day after day mainly for the sake of putting in their time; and the administrator who denounces teacher-training requirements, merely because they are a bother to him, is frequently the one who prides himself on never making an exception to any rule: It wouldn't be fair to others.

The Cure for Red Tape

To attempt to eliminate red tape merely by changing rules, simplifying machinery, and making other modifications of procedure is futile. Red tape is a *psychological* phenomenon, and it can be wiped out only by psychological methods. It can be cured only by a proper selection and training of those who administer systems of action. Upon what basis should the selection be made, and what type of training should be offered to those selected for administrative work? Although extended investigation will be necessary to provide exact answers to these questions, the foregoing discussion suggests the following general outline of policy.

In selecting any director of action, whether administrator or teacher, the persons charged with the task of making the selection should look first of all for ability to recognize and solve problems. Can the applicant for the position find and formulate new problems in his field? If he has that ability, he probably possesses sufficient intelligence to become a manager. Can he solve new problems without having appropriate procedures suggested to him? If so, he probably has sufficient training added to his intelligence to keep him from being a red tapist. Does he lack this ability to find and solve new problems, but possess great interest and skill in working

(Concluded on Page 136)



REAR VIEW OF THE OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN, SHOWING HOW THE BUILDING HAS BEEN FITTED TO THE SLOPING LOT LEVELS
William B. Ittner, Architect, St. Louis, Missouri

The Owosso Schools Plan for the Future

E. J. Willman, Superintendent of Schools, and William B. Ittner, Architect

The Owosso Senior High School, Owosso, Mich., in its general layout and planning, contains many features of distinction, some of them unique in Michigan. The project which is of special interest, proves that with an expenditure of approximately \$500,000, a community may obtain a building which lacks nothing in up-to-date facilities and which is especially adaptable to the small town.

The building was erected in 1929 and was completed and occupied in February, 1930. The building site has a 234-ft. frontage on Water Street and an east and west length of 243 ft. There is an effective lot depth of 60 ft. between the long academic wing running north and south and the Water Street front. The general plan of the building has been arranged to fit the sloping levels of the lot. There are three unit sections: one houses the joint school and community activities; one long wing is for the strictly academic work, and the rear section over the sloping part of the lot segregates the physical training and manual arts.

Making Most of Site

The building pleasingly makes the most of the difficult contour of the site. There is a river front, which offers an effective setting to the well-massed outlines of the building. It is bold and modernistic to handle a three-unit building so frankly as three units, but this is done with happy effect at Owosso. The cubicular mass of the two-story auditorium stands out in fine contrast with the long, three-story academic wing with its lighter aspect and grouped windows. The shop and gymnasium wing has been handled to afford a fine contrast with the other wings of the structure and to naturally fit the building into the contour of the rear slope.

Observed from any angle, the masses and shadows appear in perfect balance, yet are still informal. The roof line, too, is good. Its wide expanse is relieved by the disposition that is

made of the chimneys and entrance parapet.

The impressive arched entrance is set in a tower at the right of the academic wing. Mulioned windows above the doorway serve to give a further concentration of interest to the entrance detail. There is skillful informality in the impression created by the upward sweep of the pylon at the left of the main doorway, and

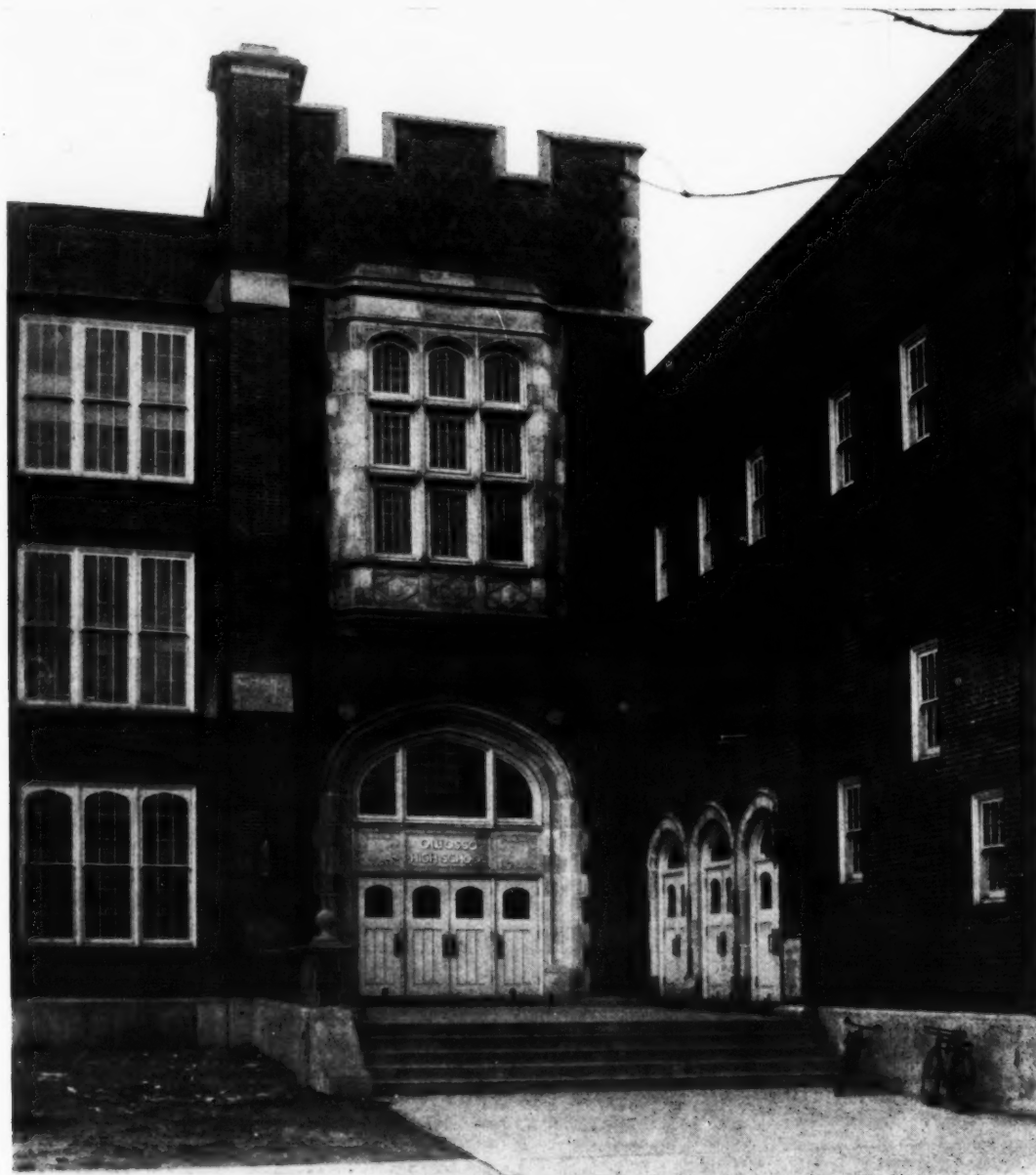
the careful subordinate panel treatment of the triple-arched doorways giving separate entrance to the auditorium. The brickwork gives good texture to the walls, and the trim is Bedford stone.

Entrance to the building is through a vestibule into a small foyer, from which impressive stairways of stone and metal rails, lead to the



AUDITORIUM, OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN
William B. Ittner, Architect, St. Louis, Missouri

The auditorium, which seats 1,020 persons, is fully equipped for modern high-school work, as well as community service.



MAIN ENTRANCE TO OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN
 William B. Ittner, Architect, St. Louis, Missouri
 Auditorium entrance at right represents an interesting variation that properly subordinates the auditorium doorway to the main entrance.

upper floors. The 12-ft. halls are faced with brick. The floors in the first-floor corridors are of terrazzo, while the upper halls are covered with battleship linoleum. All ceilings have sound-controlling materials. The woodwork is birch, stained in a walnut color, and the cabinets and other furnishings conform in both style and finish.

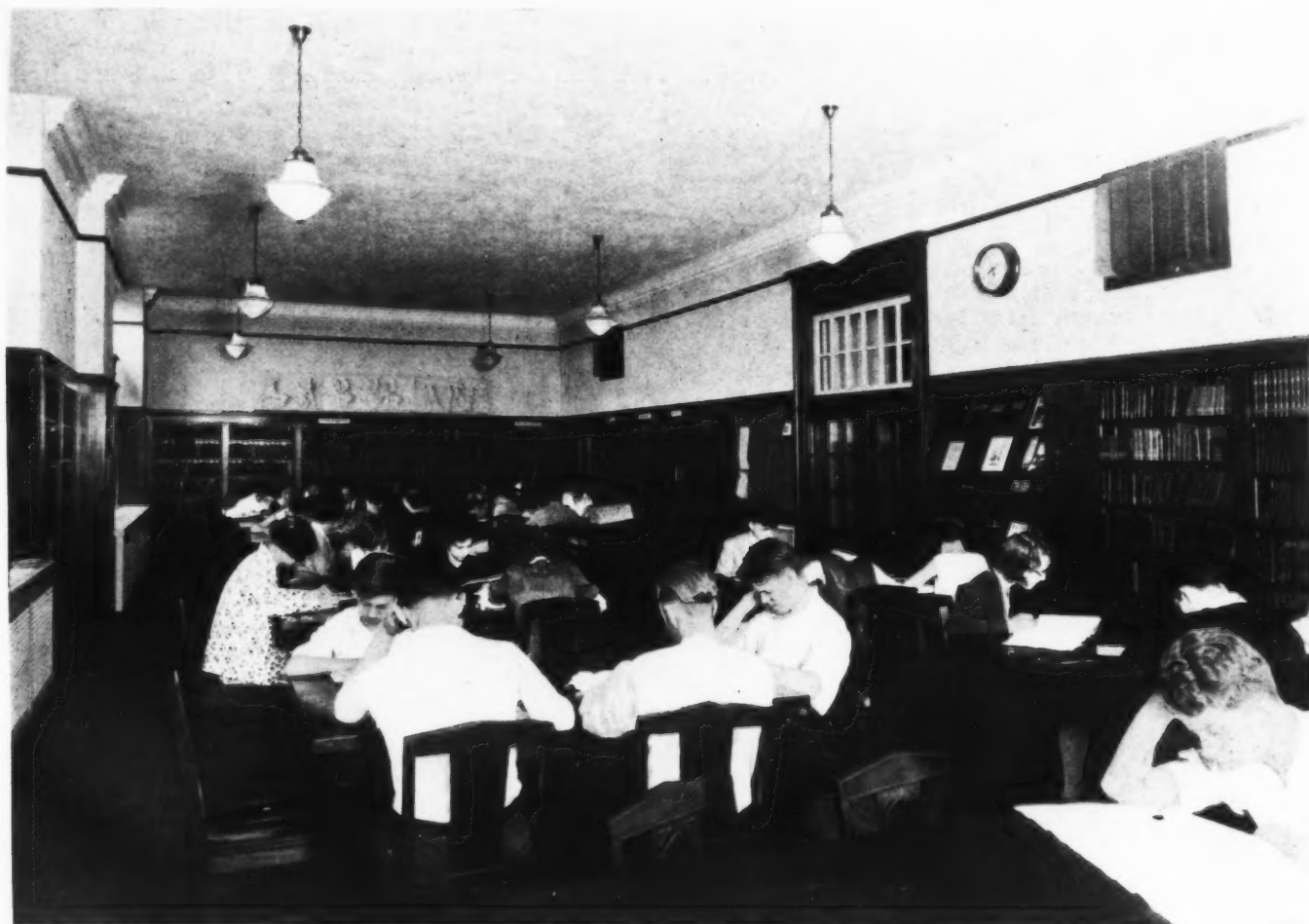
Interior Arrangement

The building was arranged and planned to function administratively, in a most effective way. There are 33 room units for instruction, exclusive of the officers' and teachers' quarters. The average classroom size of 22 by 28½ ft. is expanded to 24 by 31 ft., where the domestic arts are taught. The science rooms are 22 by 40 ft. in size, while the bookkeeping rooms are 22 by 46 ft. The machine and woodworking shops are allotted 5,060 sq. ft. of floor space.

The first floor contains the principal's office and a children's clinic in the front hall at the left. From this point, the corridors lead out to all parts of the building. The music room is remote from the other rooms, but has immediate access to the auditorium and the stage. The library, which combines utility with beauty, has shelf space for 3,500 volumes, with worktable space for 72 pupils. The auditorium, which seats 1,020 persons, is fully equipped for high-school work, as well as for community service.

The working arrangements for the various rooms and groups have been well thought out. This is especially noticeable in the segregation of the science rooms on the third floor with joint laboratory and storage rooms. A room has been provided for three aquaria, several animal cages, and for specimens in botany. Growing rooms for seed testing and other agricultural science work also are provided. The lighting is adequate and the lighting control contemplates full use of the motion-picture demonstration. Museum shelving is adequate, and storage and table space insure careful and wise application to the apparatus used.

The building is heated by steam, two low-pressure boilers being used with automatic stokers. The air is filtered, humidified, and fan-circulated, and controlled from a switchboard



LIBRARY, OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN
 William B. Ittner, Architect, St. Louis, Missouri

Utility is combined with beauty in the library, with shelf space for 3,500 volumes, and worktable space for 72 pupils.

in the fanroom. Water for showers and for certain other services about the building is passed through special water softeners. Carefully located fireproof stairways, fully inclosed, obviate the necessity for any disfiguring outside fire escapes. Birch, stained in walnut color, is used for the woodwork, and the cabinets and other fittings harmonize in style and finish. Combination chair-desks are used throughout the building. Showers, lockers, demonstration rooms, and special exhibit space also are provided. Special care has been given to the expansion in physical training and health activities made possible by the gymnasium and its accessory rooms. There are a number of shops for the teaching of printing, auto mechanics, machine-shop work, and other subjects.

Secondary-School Emphasis

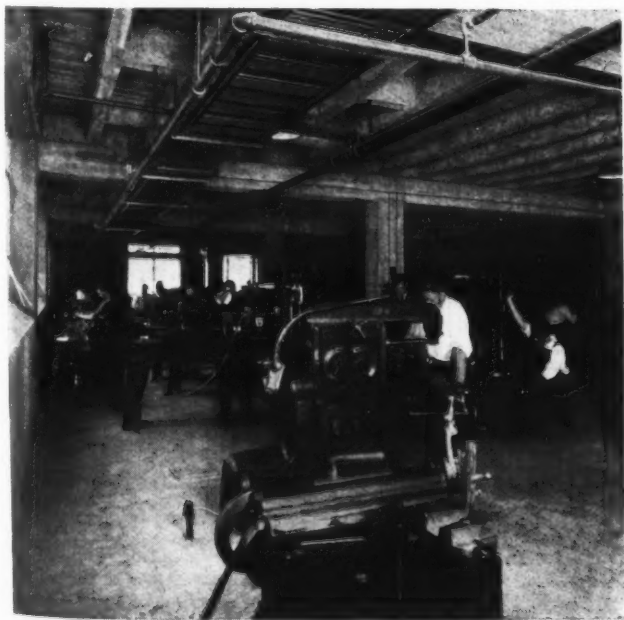
One might separate for particularized discussion numerous features of this building and speak of their educational advantages. But, a minute inquiry would tell only a small part of Owosso's educational leadership in providing by means of this building a complete background for schoolwork under flexible schedules. The modern high school is a many-sided activity, and a plant like this which functions in many directions is an expression of complete forces which are operating everywhere to bring up the standards of outlying schools to the full flexible programs of the large cities. Educational vision such as this building represents has been confined in the past too much to urban centers.

It had been the desire of the Owosso board of education that its building program have as a primary objective, the modernizing of the elementary schools and the enrichment of the elementary-school activities. The preliminary survey, however, developed the fact that the central high school which had been built in 1908, had been carrying on with 775 pupils crowded into a space designed for 300 pupils. It was felt that the best all-around relief from accumulating housing difficulties lay in the plan of the high school just described.

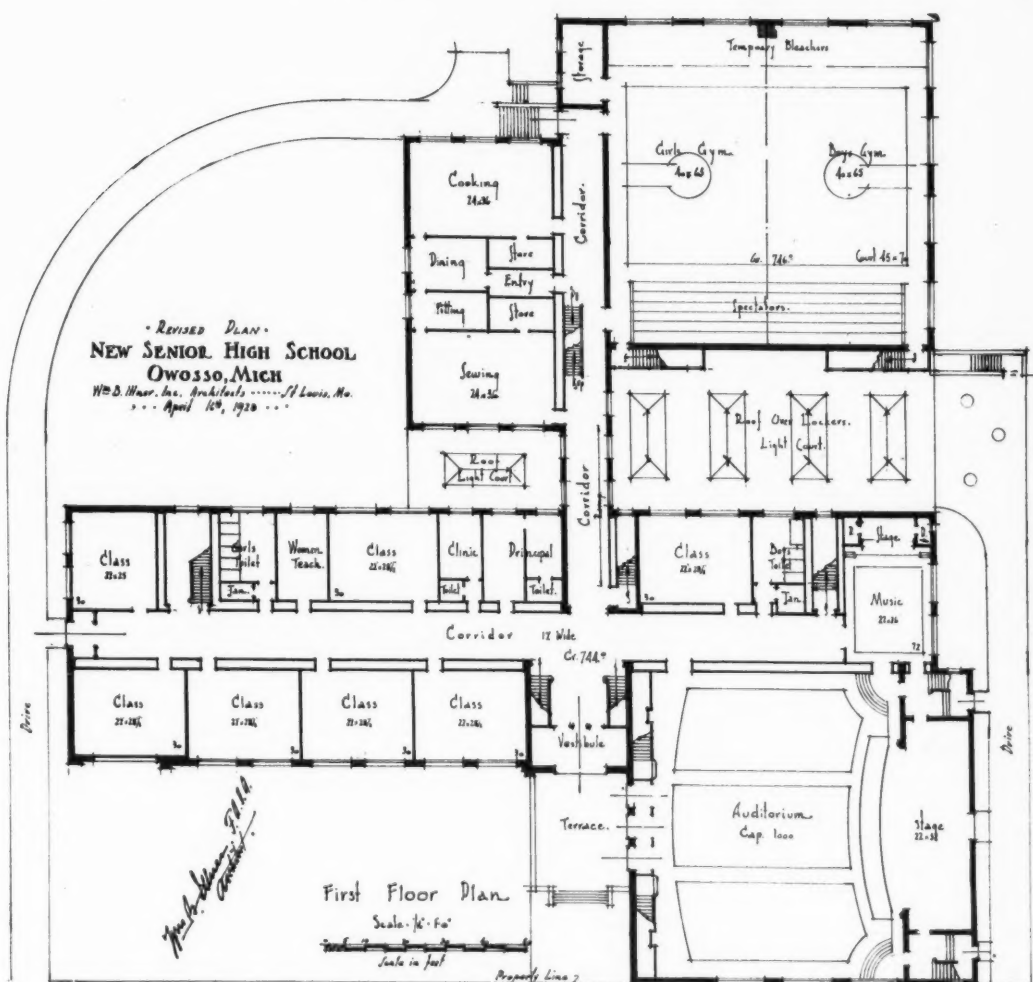
Total Costs

The entire program intended to anticipate expected conditions in 1935, includes alterations and additions to existing buildings with provision for junior-high-school work, at a total expenditure of \$777,000.

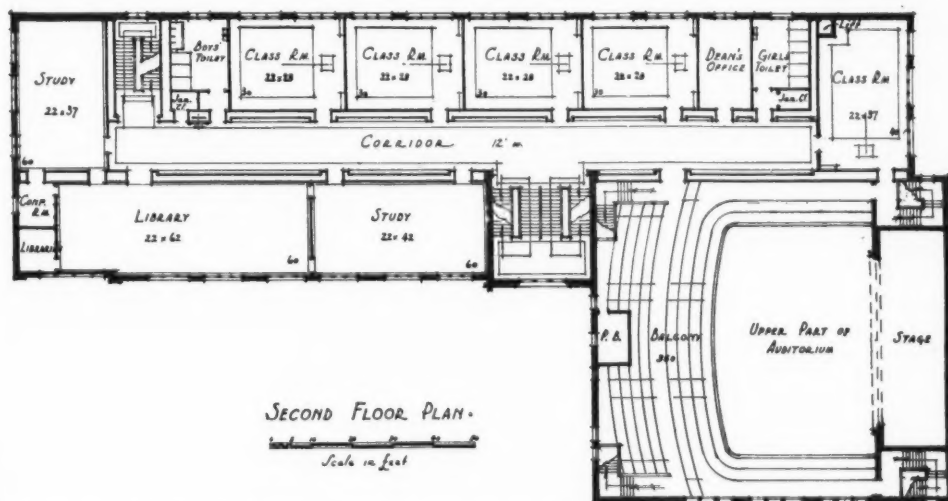
The high school was erected at a cost of \$422,427, exclusive of equipment and architect's fees, or a per-pupil cost of \$427.



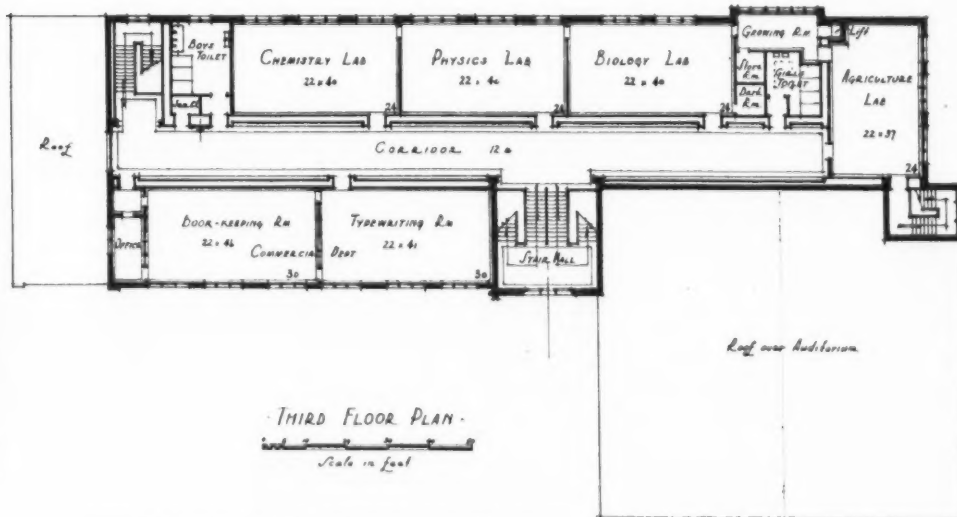
THE MACHINE-AUTO-MECHANICS SHOP, OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN
William B. Ittner, Architect, St. Louis, Missouri
This shop occupies a space of 3780 square feet.



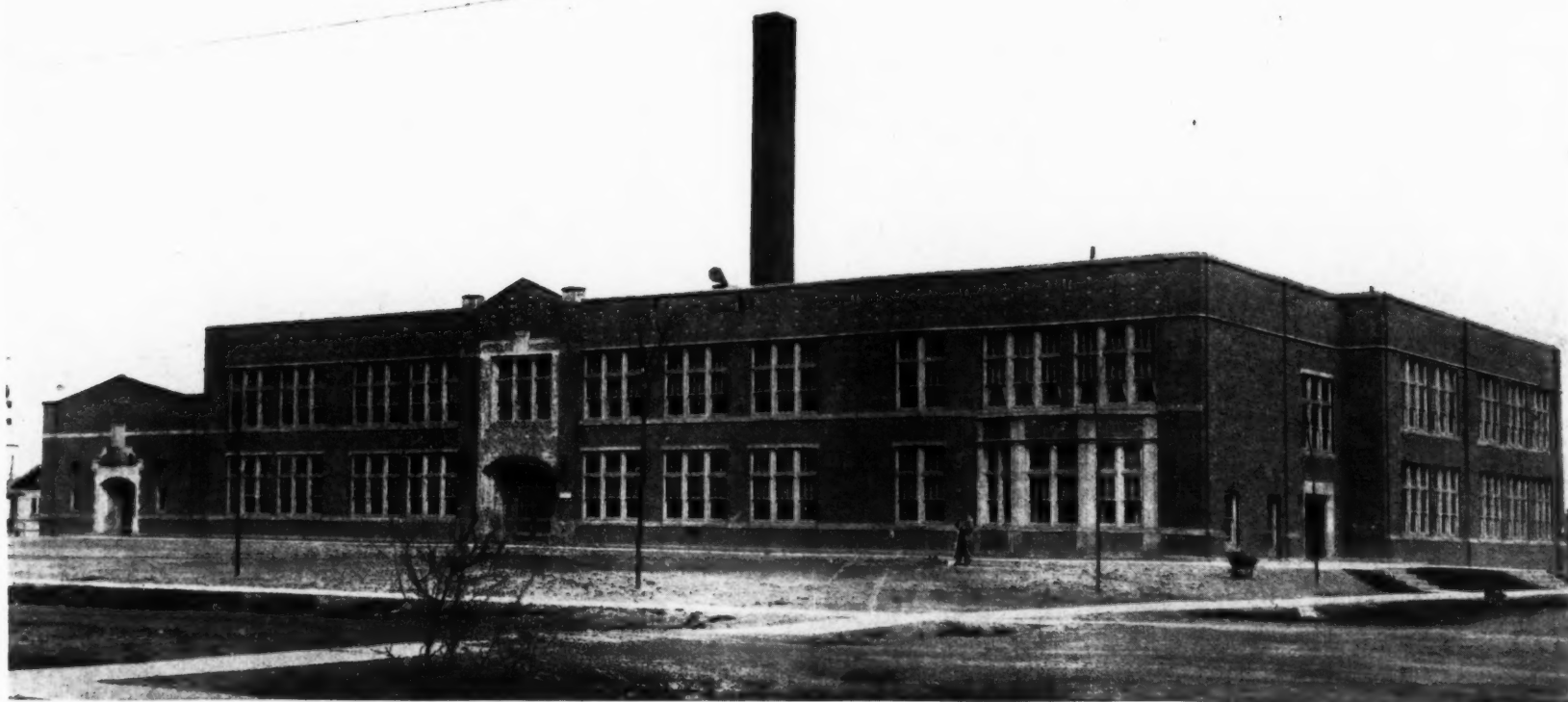
FIRST FLOOR PLAN OF THE OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN, SHOWING LONG FRONTAGE OF ACADEMIC WING, L SHAPE, AND ACTIVITY GROUPING



SECOND FLOOR PLAN, WITH LIBRARY SPACE IN FRONT, OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN



THIRD FLOOR PLAN, OWOSSO SENIOR HIGH SCHOOL, OWOSSO, MICHIGAN
William B. Ittner, Architect, St. Louis, Missouri
Third floor quarters are devoted to commerce and science.



POTTER ELEMENTARY SCHOOL, SAGINAW, MICHIGAN
Frantz and Spence, Architects, Saginaw, Michigan

PLANNING GRADE-SCHOOL BUILDINGS FOR FLEXIBILITY

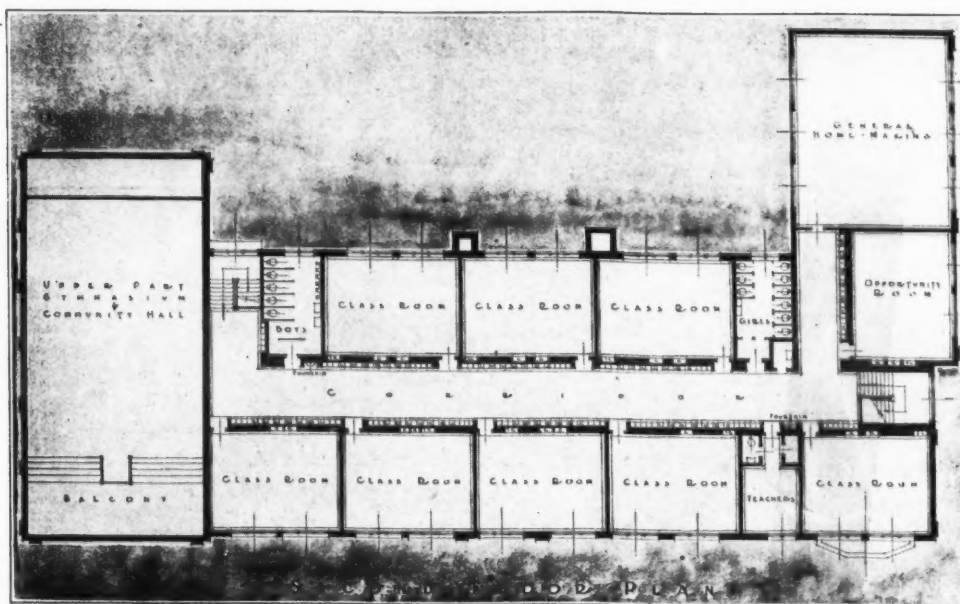
Saginaw Builds for Educational Expansion

A problem frequently overlooked in the planning of school buildings is the almost certain change in school organization and classroom methods, and the probability of necessary modifications in a building to meet newer educational needs and practice. Two school buildings which have been erected with the idea of flexibility in use and modification in minor details of plan are the Handley and Potter Schools at Saginaw, Michigan. In laying out these buildings, both the superintendent of schools and the architect have carefully taken into account changes which will come in the school organization and in the use of the building, and have sought to anticipate these changes without increasing the cost of the plan and construction of the buildings.

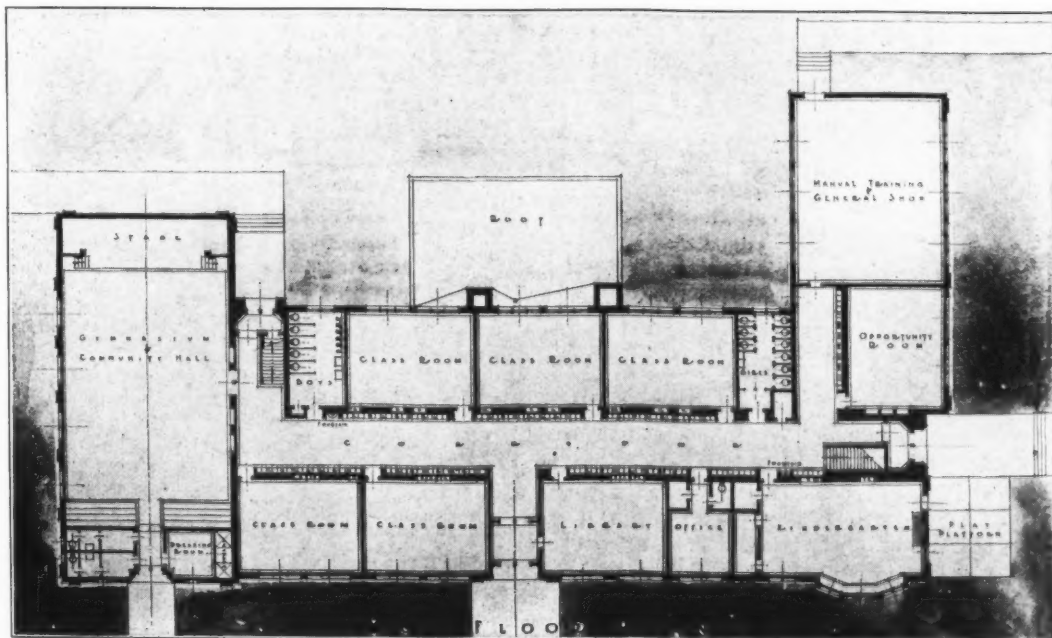
The Handley School

The Handley School, serving an elementary-school population in a rapidly growing residential district, is designed in a modified Georgian style. It is planned for future additions, by continuing the wings to the rear. The rooms planned for study halls make the building suitable for platoon use, if so desired. The facilities of particular interest are the duplicate kindergarten suites with workrooms, the direct exterior communication to the play terrace along the front, and the special classrooms for the physically handicapped. The building has been designed (a) within stipulated cost limits, (b) of fireproof construction, and (c) in conformity to the National Education Association candle of ratios, in cooperation with the superintendent of schools.

Among the special features are the linoleum floors and base in the corridors, kindergarten, offices, and clinic; the terrazzo floors in the toilets and on stairs and landings, and maple floors in the classrooms; the glazed terra-cotta side walls in the playrooms and toilets; and the double lockers recessed in the corridor walls and vented into the air ducts. The interior finish is oak throughout.

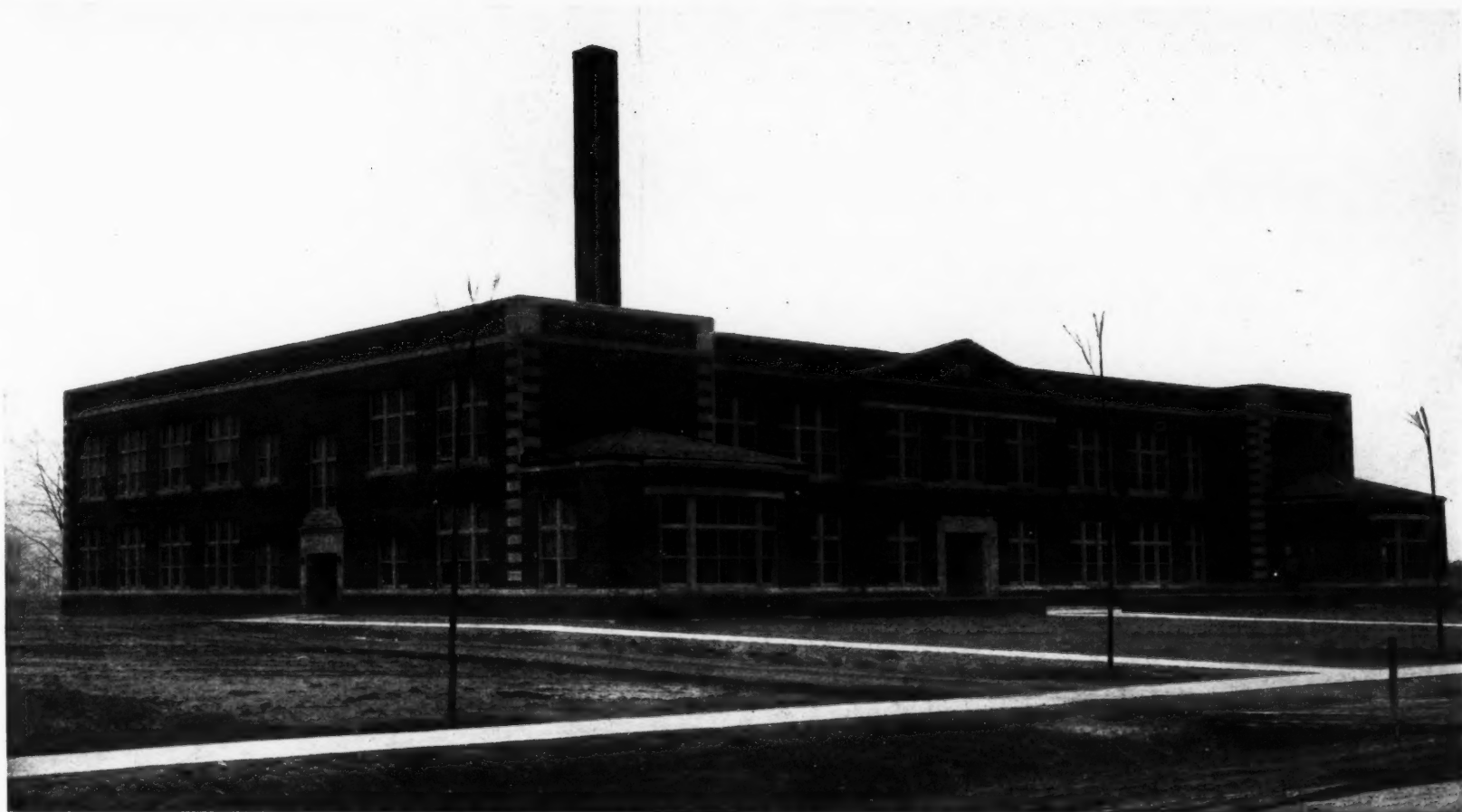


SECOND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR PLANS OF THE POTTER ELEMENTARY SCHOOL, SAGINAW, MICHIGAN
Frantz and Spence, Architects, Saginaw, Michigan



HANDLEY ELEMENTARY SCHOOL, SAGINAW, MICHIGAN
Frantz and Spence, Architects, Saginaw, Michigan

The relative standing with the National Education Association candle of ratios is as follows:

	Handley School per cent	N.E.A. Standards per cent
Stairs and corridors.....	18.1	20
Administration	23.6	16
Walls and partitions.....	13.3	10
Flues	1.24	3
Accessories8	1
Instruction	43.0	50

The over and under of administration and instruction, respectively, are due to the future expansion allowance made in the present plan. The size of the boiler and fuel rooms, the plenum chamber, the toilet facilities, and the clinic were planned for future expansion.

The building has reinforced-concrete columns, beams, slabs, and stairs, with brick exterior walls, and was built during the winter of 1928-29.

The provisions for special classrooms, comprising such facilities as fresh-air rooms equipped with Austral-type sash, rooms for crippled children with ramps for wheelchairs, the cafeteria, the restroom for cots, the clinic, and rooms for sight-saving, deaf, and subnormal classes, were carried out for segregation of these classes.

The playroom, or gymnasium, can be opened as a unit for community assemblies, to the exclusion of the remainder of the building.

The cost of the building, including the direct-indirect heating system, the electrical contracts, plumbing, and general construction, amounted to \$170,000, or 29.38 cents per cubic foot.

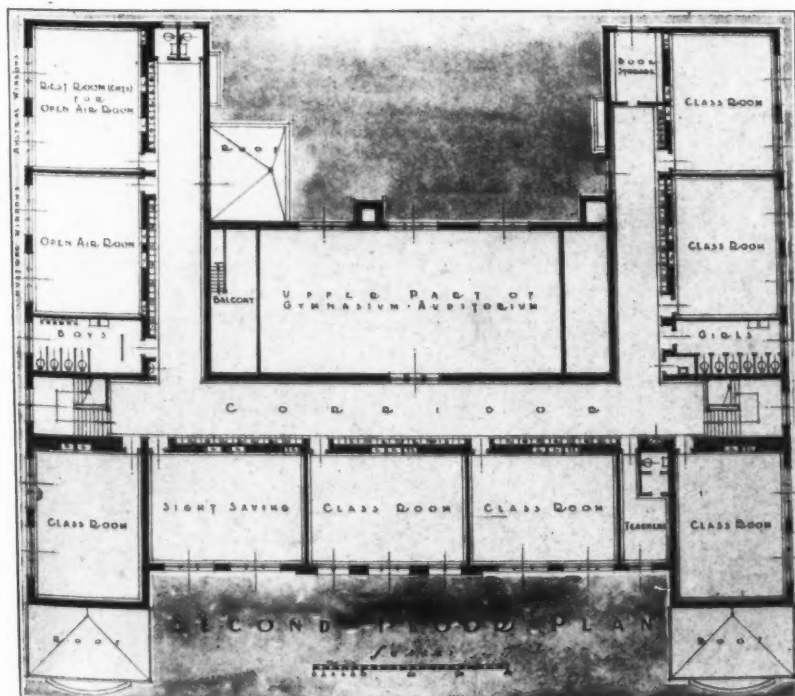
The Potter School

The Potter School is an elementary building, serving an industrial district in a fairly well sta-

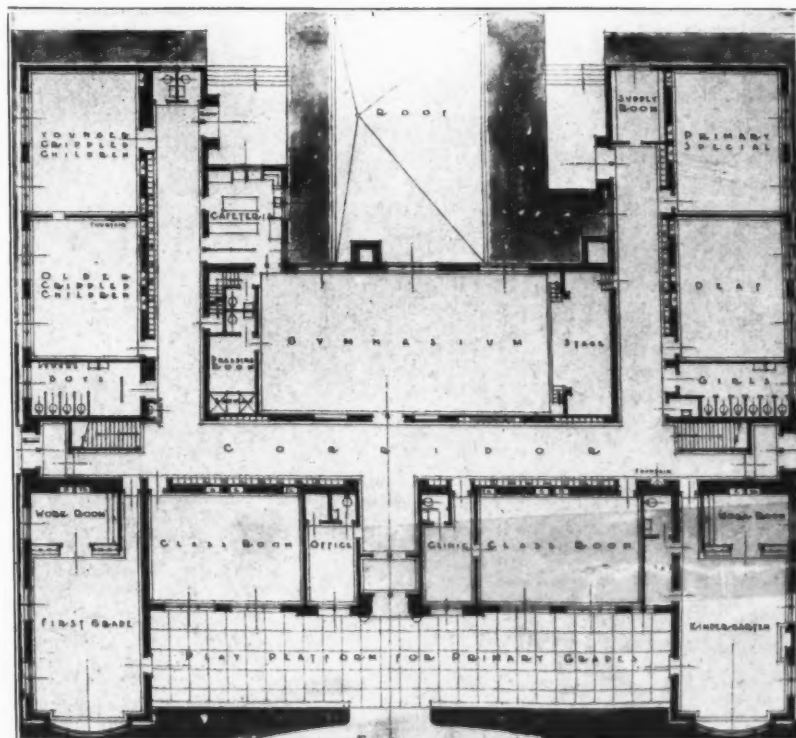
bilized neighborhood. It has been planned for wider use as a community and night-school center, and contains an assembly hall suited especially for a variety of uses, and a branch library. In planning the building, the architects had in mind the possible adjustment of the building to the platoon plan of organization, flexibility in the use of all its departments, and economy of layout.

In laying out the building, special care was taken to see that corridor widths, heating plant, and administration areas are of a sufficient capacity to serve a future increased classroom total. These classrooms may be added east of the manual-training wing, for which electrical feeds, ducts, and steam-heating lines have been provided.

The following table compares this building and the N. E. A. candle of ratios:

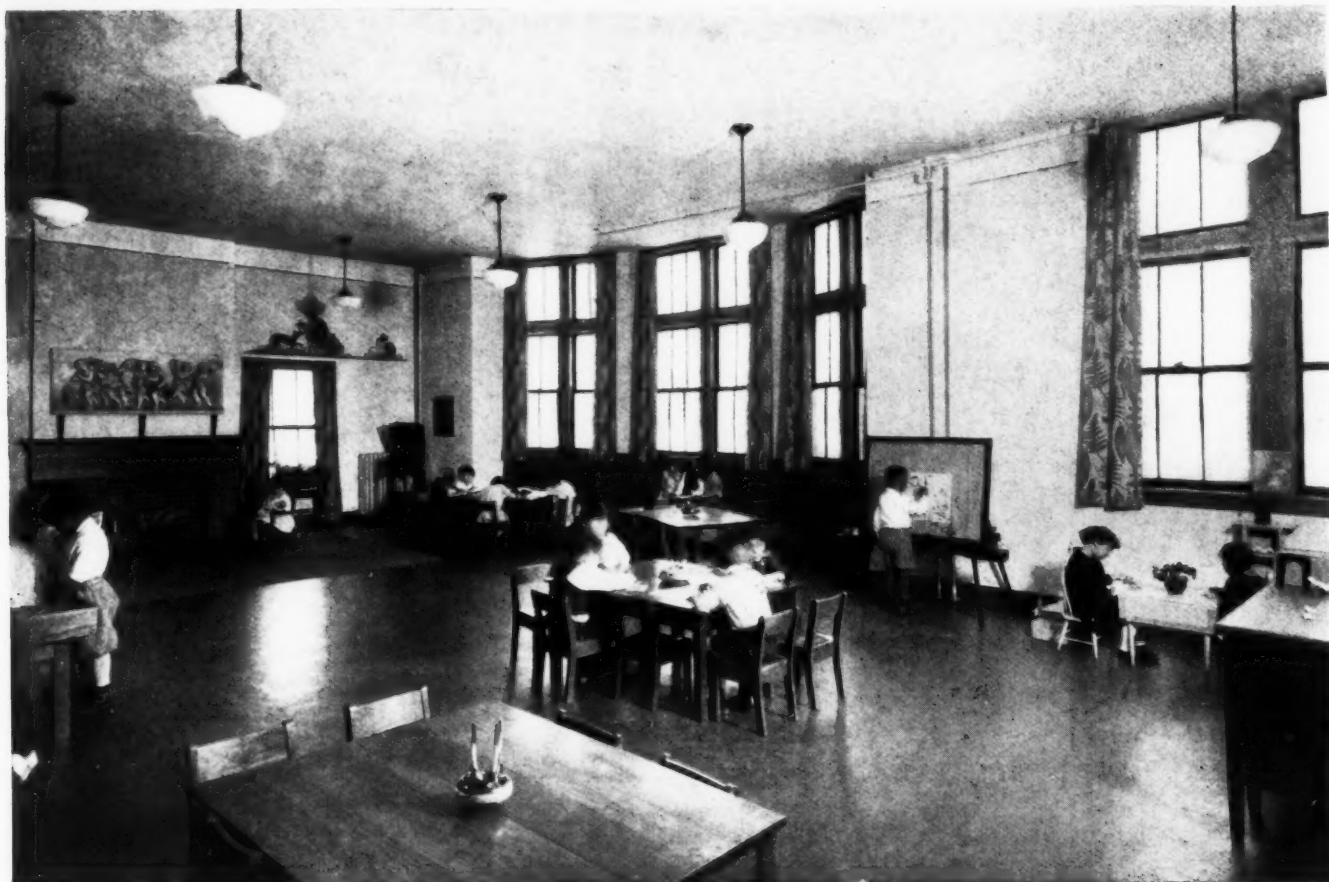


SECOND FLOOR PLAN



FIRST FLOOR PLAN

FLOOR PLANS OF THE HANDLEY ELEMENTARY SCHOOL, SAGINAW, MICHIGAN
Frantz and Spence, Architects, Saginaw, Michigan



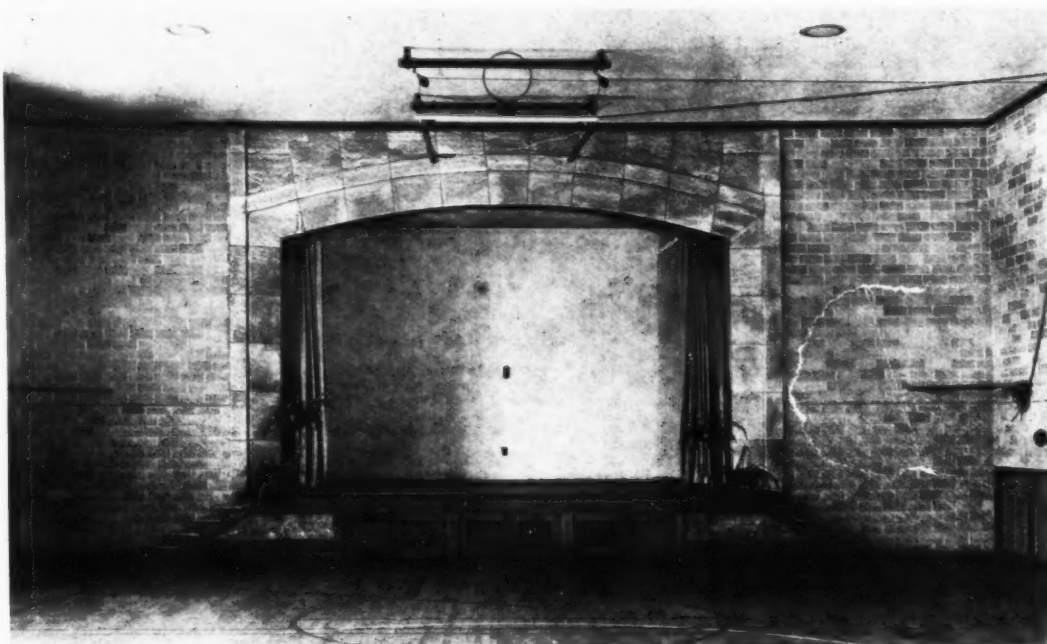
KINDERGARTEN, POTTER ELEMENTARY SCHOOL, SAGINAW, MICHIGAN
Frantz and Spence, Architects, Saginaw, Michigan

	Potter School per cent	N.E.A. Standards per cent
Stairs and corridors.....	15.22	20
Administration	22.	16
Walls and partitions.....	10.2	10
Flues	1.5	3
Accessories	0.0	1
Instruction	52.08	50

The construction of the building is reinforced-concrete columns and slabs, with brick and stone exterior walls, giving a fireproof building with a low insurance rating. Linoleum floors and base have been used in the corridors, offices, library, kindergarten, and teachers' restrooms, with glazed terra-cotta tile in the toilets and gymnasium, and maple floors in the classrooms. Double lockers recessed flush into the corridor walls are connected with the ventilating system. The kindergarten walls were decorated by students of the high-school art department, with popular fairy tales in color.

The teachers' restroom is planned to be used for a clinic on certain days of the school year.

The cost of the building, including the general construction, heating and ventilation, plumbing, and electrical work, was \$161,000 or 27.5 cents per cubic foot.



COMMUNITY ROOM AND GYMNASIUM, POTTER ELEMENTARY SCHOOL, SAGINAW, MICHIGAN
Frantz and Spence, Architects, Saginaw, Michigan



KINDERGARTEN



KINDERGARTEN WORK ROOM

HANDLEY ELEMENTARY SCHOOL, SAGINAW, MICHIGAN
Frantz and Spence, Architects, Saginaw, Michigan



SENIOR HIGH SCHOOL, PAWTUCKET, RHODE ISLAND
Monahan and Meikle, Architects, Pawtucket, Rhode Island

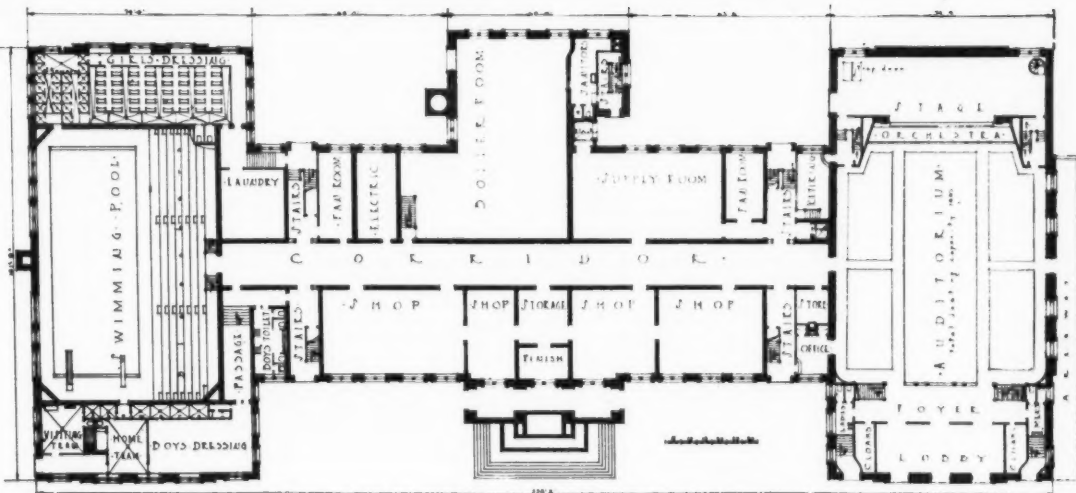
THE PAWTUCKET SENIOR HIGH SCHOOL, PAWTUCKET, R. I.

The Pawtucket Senior High School is a stately building, located on the top of a low hill overlooking the city of Pawtucket, R. I. The building is noteworthy for its dignified beauty, its complete equipment, and the variety of special departments. The structure extends along the river front 338 ft., and reaches a height of 196 ft. at the pinnacle of the central tower. Along the river the property has been terraced and planted, and stairs have been built with a promenade in front of the building. On the upper terrace wall there is a 60-ft. flagpole.

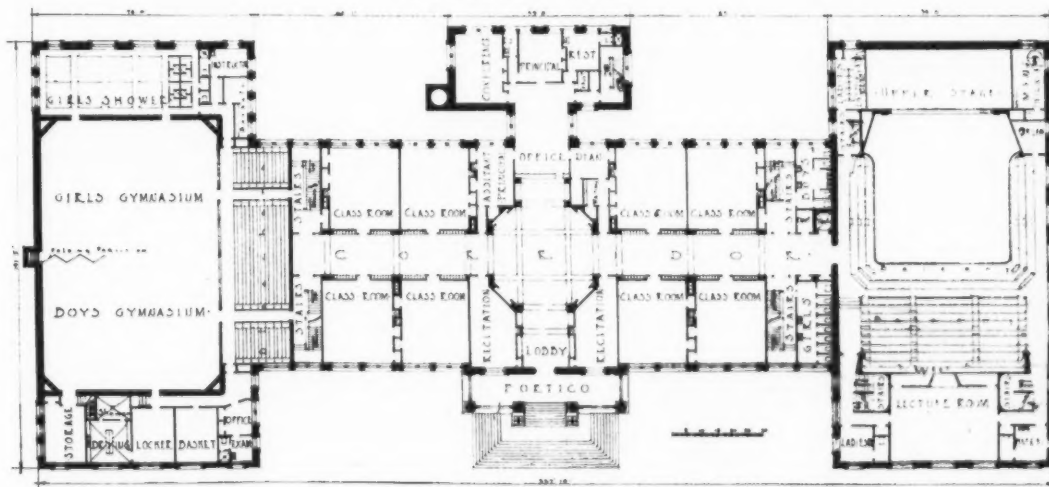
The planning and erection of the building were carried out with the cooperation of the school authorities, the architects, the contractors, and the city authorities, working with Supt. William A. Newell. The construction of the building was begun in August, 1925, and it was completed and opened for the first time in June, 1927.

The building, which has a student capacity of 1,400, contains 26 classrooms. The main entrance is in the center of the building on the first floor, facing the river. Directly opposite the entrance is the administrative section, devoted to the main offices, with rooms adjoining for the principal, assistant dean, infirmary, and a large faculty conference room. The colonial style has been used as the main decorative scheme with pleasing effect.

The exterior construction of the building is of real tapestry brick, composition stone, and terra cotta, with roof of copper shingles, tar, and slag, and a tower of brick, covered with copper. The interior construction is of steel, with the basement in glazed brick and concrete, and concrete floors. The upper-floor construction is of steel-bar joist, embedded in concrete,



BASEMENT PLAN

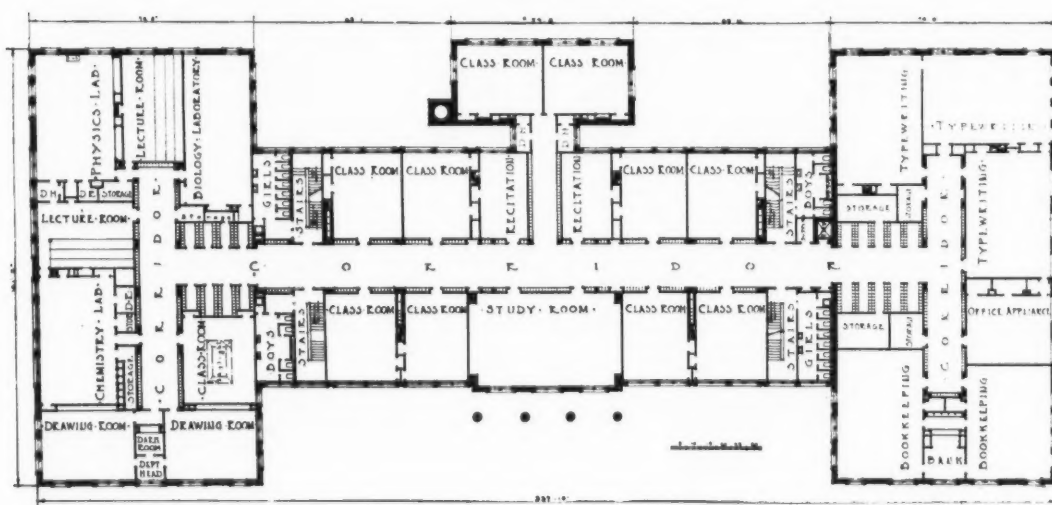
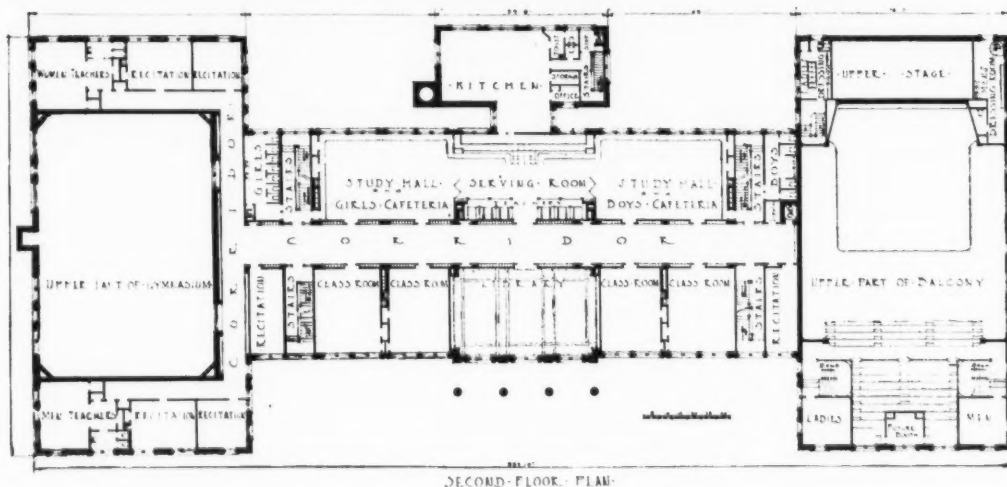


FIRST FLOOR PLAN

FLOOR PLANS OF THE SENIOR HIGH SCHOOL, PAWTUCKET, RHODE ISLAND
Monahan and Meikle, Architects, Pawtucket, Rhode Island



AUDITORIUM, SENIOR HIGH SCHOOL, PAWTUCKET, RHODE ISLAND
Monahan and Meikle, Architects, Pawtucket, Rhode Island



SENIOR HIGH SCHOOL, PAWTUCKET, RHODE ISLAND
Monahan and Meikle, Architects, Pawtucket, Rhode Island

and the finish of the floors throughout is battleship linoleum. The partitions are of metal studs, with rib lath and plaster, and ceilings covered with hard plaster. The door and window trim, baseboards, blackboard trim, and chalk trough are of metal, finished in mahogany to match the doors. Stairways throughout are of cast-iron and steel, and the doors and trim of the stair towers are copper. The toilets and shower and dressing rooms have tile floors, marble walls, and partitions.

The swimming pool, which is in the basement, is 28 by 75 ft. in size, and is lined with colored ceramic tile, with floor and walls finished with

1 by 2-in. tile in a basket-weave pattern. The ceiling and walls above the tile are finished in cement plaster, painted, and enameled. Overhead showers for boys and side showers on partitions for girls are controlled by the instructor from a platform which adjoins the swimming pool and gymnasium.

The gymnasium in the north wing of the first floor, 60 by 90 by 22 ft. in size, is divided into two sections by folding partitions so that the room may be used for separate classes when desired. The walls which are 22 ft. high, are of enameled glazed brick, with a white plaster ceiling and maple floor. An adjoining balcony on

the floor level provides accommodations for 400 and is separated from the gymnasium proper by a heavy wire partition. There is a separate room for the equipment. In the girls' division there are 650 baskets for uniforms, individual showers, and 40 dressing rooms. The showers are controlled by the supervisor from a central mixing valve. The gymnasium in the north wing contains 700 lockers for the boys' division. There are examination rooms, an instructor's room, shower rooms, and basket room.

The remainder of the basement is devoted to a laundry which cares for the needs of the different departments of the school, and a heating plant, consisting of three 200-h.p., horizontal, tubular boilers, providing for vacuum-steam heat, with thermostatic control in each room. One 50-h.p. boiler supplies the steam and hot-water needs of the pool, the laundry, the kitchen, and the domestic-science service. Oil is used for fuel, although the installation provided for coal bunkers of 200-ton capacity.

The auditorium, which has a seating capacity of 900 in the orchestra pit and 600 in the balcony, has the appearance of a little theater and embodies the essentials of a playhouse, as well as a meeting hall. A separate unit linked into the study hall of four floors, the auditorium possesses rare architectural attractiveness. To perfect the acoustic qualities, the ceiling of the foyer and the main ceiling are treated with a sound-controlling material. The stage, 23 by 71 ft. in size, is equipped with scenery loft, drops, border, spot and footlights, asbestos curtain, and a complete switchboard control. A property room is located under the stage, with boys' and girls' dressing rooms on each side.

Separate public entrances and exits have been provided, so that the auditorium can be used separately and apart from the strictly school functions when desired. It is also available for use by means of stairways near by and corridor entrances on each floor.

A model cafeteria and kitchen, located on the second floor, accommodates 400 pupils and 24 teachers at one time. The kitchen is equipped with hotel kitchen appliances.

The library is finished in mahogany and is fitted with bookcases containing space for 13,000 volumes, tables with linoleum tops for seating six at each, charging counter, magazine racks, files, and cork bulletin boards. The ceiling is finished in old ivory, and the walls are finished in brown Tiffany blend.

The administrative offices comprise a principal's office, flanked by offices for the dean, sub-principal, and teachers' conference rooms, and restrooms. There is a vault for school records and papers, a telephone, a switchboard, and complete mahogany furniture. A master clock also controls the watchman's register.

The study rooms have a seating capacity of 90 pupils each and are equipped with desks and other facilities similar to the classrooms. A folding partition between the serving room and the boys' and girls' lunchrooms makes it possible to use these rooms for study purposes whenever desired.

The building is equipped with a vacuum-cleaning system. An intercommunicating signal-bell and telephone system operates 22 bells, 90 telephones, 87 clocks, 12 watchman stations, and 35 fire alarm stations.

The lighting fixtures in the classrooms are prismatic units. All exits are on separate emergency circuit. The lights in the gymnasium are flush with the ceiling, protected with iron grilles, and controlled by the instructors. The drawing and art departments have individual lighting fixtures on the tables. The auditorium lighting is through large flush-ceiling fixtures, controlled from the stage switchboard.

The applied-arts department on the fourth floor has skylights as well as window lighting, and the walls are finished with cork bulletin

(Concluded on Page 128)

What is Supervised Study?

L. R. Kilzer, University of Wyoming

A survey of available literature has led to the conclusion that there is little, or no agreement, in regard to the meaning of supervised study. Some writers would lead one to believe that supervised study is merely keeping order in the study hall; some imply that it is a period of silent study in the presence of the classroom teacher; some refer to it as an abandonment of the conventional recitation and the use of the divided period; some define it as a lengthened period; some say it is studying in the classroom instead of at home; some insist that it means helping, guiding, and encouraging the individual pupils, from the beginning of the class period, until the end of the class period; and still others hold that it is the effective direction of all of the pupil's learning activities. It can be truthfully said that there are thirty or more different techniques all of which are sometimes called supervised study.

In view of the confusion that exists in regard to the meaning of the term, it is worth while to propose a composite definition, in an attempt to stress the most important elements mentioned by some of the leading writers in the field of supervised study. The following definition is therefore proposed: *Supervised study is the procedure whereby each pupil is given encouragement and guidance in all of his learning activities so that he becomes self-reliant and efficient in his intellectual pursuits.*

Meeting Individual Differences of Pupils

Explanation and justification for this definition is now attempted. Attention is called, first of all, to the fact that *each* pupil is to receive attention. Education has for a long time assumed that the foremost pupil can take care of himself, if the hindmost pupil is properly cared for. Much money and effort have been expended in an attempt to make average students out of morons and border liners. It is, of course, laudable to help the dull, slow pupil to make the most of himself, but the danger is that too much effort in this line may tend to set up standards of mediocrity which can be met by superior students without any real effort. The secondary-school population of today is highly heterogeneous, and will perhaps become even more so. Individual differences must, therefore, be taken care of in supervised study. At times the teacher's attention should be directed to the individual, but when two or more pupils face a common difficulty, both time and effort may be economized by treating such pupils as a group. A bit of wholesome rivalry can be generated in the group activity.

The definition calls for encouragement of the bright, fast workers as well as of the dull, slow workers. Every pupil who has made worthy effort should be encouraged by a nod, a smile, or by a few remarks. The brighter pupils will gladly attack enriched assignments, and the duller ones will work up to their capacity when approval is given by their teacher.

Guidance Stressed in Supervised Study

Wise guidance should be stressed. The supervisor of study must understand child nature. In high school, it is essential that the nature of the adolescent be understood and appreciated. The teacher must be a master of the laws of educational psychology, especially the laws of learning, and should train pupils to apply these laws effectively. Merely giving a set of rules for study will not suffice; the pupil must be supervised carefully, while he applies these rules and weaves them into habits which make him self-reliant and effective in his intellectual pursuits. Wise guidance implies that the teacher must

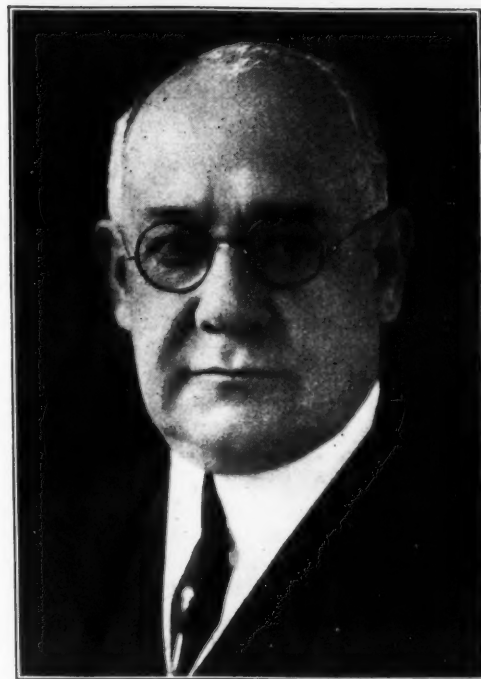
not do the work *for* the pupil. The teacher who goes to the pupils at work who are making satisfactory progress, and says: "What can I do for you now?" is perhaps a "snoopervisor" rather than a supervisor. Many pupils at times need neither assistance nor interference. Just enough help should be given to prevent discouragement, waste of time, and learning perversions.

Supervised study applies to all of the learning activities of the pupil, and is therefore not confined to any arbitrary division of the class period. It has been held that supervised study should take place in the so-called study division, only, and that it has no place in review, recitation, or assignment. Such a conception places a limit on the meaning of supervised study. Supervision of study may take place at any time during the class period, when encouragement, or wise guidance, is necessary. It is wise to extend the conception of supervised study, to include the pupil's study activities outside the classroom or schoolroom. Certainly the training received in school should carry over to the ordinary study-hall activities, and to the learning pursuits in the home.

Supervision Must Diminish

The aim of supervised study is the development of a self-reliant and efficient individual who can, and will, succeed in intellectual pursuits without further guidance. The pupil must be guided until he can study alone. The amount of supervision should be diminished gradually, as the pupil becomes more nearly independent in his learning activities, and until he can be placed upon his own responsibility.

The proposed composite definition says nothing about any arbitrary division of the time of the class period. The teacher should decide for himself just how much time in any day, or week, should be devoted to review and recitation, to assignment, and to study. Sometimes, it is wise to use two or more successive class peri-



LEWIS E. MYERS
President, School Board
Chicago, Ill.

Mr. Myers, who was recently elected as president of the Chicago school board, is president of the L. E. Myers Company, builders and operators of public utilities, the Central Illinois Utilities Company, and the Eastern Illinois Ice Co. Mr. Myers was graduated from the Episcopal Classical Academy of Pittsburgh, Pa., and the Western University of Pennsylvania.

ods for exploration and presentation; at other times it is wise to use several successive class periods for study alone. One general rule, however, is applicable; namely, *on the average, at least half of the class time should be devoted to study under the careful supervision of the teacher.* The principal function of the modern teacher is not to cram pupils' minds full of facts, but to train pupils in effective habits of study.

The results of supervised study have often been somewhat disappointing, but certainly little could be expected when there is no agreement on the essential elements in supervised study procedure.

Rumblings

John J. Barry, Ph. D.

The other day in a class of senior-high-school boys, a rather heated discussion arose over an editorial that had appeared in a local paper. The writer of the article bitterly criticized the actions of the Federal Government in permitting graft and bribery in "high places." One spirited member of the class stated that he had, until the last year or so, regarded the spirit of the Federal Government as symbolized in the figure of Uncle Sam, a kind, genial old man, who was very good to his children provided they were obedient, but very strict with them when they dared to disobey. Today, he continued, this grand old figure is passing into discard, merely a ghost of the past, and in his place looms up the ponderous figure of a large man with manifold chins, protruding mid-section, his appearance made less ungainly with a Prince Albert suit and a high hat. Across the broad curve of his chest he wears a gold chain whose large links form the words Pork Barrel.

A rather serious indictment to be made by a youth; but it reveals a fact America should consider seriously: that the youth of today is the citizen of tomorrow, and that the future of America lies in his hands. Tear down the ideals of patriotism and respect for law and order in his mind and America has need to fear. The utter lack of loyalty on the part of some government officials, the oil scandal, the illicit lobbying, the prohibition problem, fiasco, and the

influence of money in courts of law, are incidents well known to high-school boys; and these disgraceful events are forming definite impressions that soon or later will manifest themselves.

The average high-school student not only reads and understands the effect of government scandals upon the people at large, but he sees about him a wholesale disregard for law and order. Prohibition has brought the latter vividly before him. He feels deeply hurt over this sad state of affairs, wondering why the government fails to enforce strictly a Federal statute, or repeal or modify a law that so many disregard.

If this is the attitude of the boy who is interested in his country and its problems, what must be the effect upon the boy who has inherited no patriotism from his parents and in whose home there is no such thing as the fostering of love of country? It is this latter type of boy and his companions that America must be on her side or she has cause to fear.

Another boy in the same class told of a demonstration which he witnessed a short time ago, and which revealed the need of anxiety and watchfulness on the part of America. A parade of boys, ranging in ages from 12 and 17, and wearing red banners on their arms and hats, walked through the downtown sections of a

(Concluded on Page 126)

Administration of Janitorial-Engineering Service-VI

H. S. Ganders, University of Syracuse, Syracuse, N. Y.

C. E. Reeves, Elmira College, Elmira, N. Y.

(Conclusion of Series)

THE PLAN OF ORGANIZATION

The plan of organization of the department having charge of janitorial-engineering service varies greatly from city to city. In one city, the official in charge of the janitor-engineers may be directly responsible to the board of education, or even to the city council. In another, he may have the status of an assistant superintendent, responsible directly to the superintendent of schools; while in still another he may have the status of a supervisor, responsible to the superintendent of schools, or to an assistant superintendent. In some cities, there are social subordinate officials, having charge of janitorial-engineering service, and responsible directly to some chief official, perhaps with the designation superintendent of buildings and grounds, or superintendent in charge of business affairs, and having the status of an assistant superintendent.

The fact that schools are operated primarily for the education of children should always be kept in mind. For this reason, the official who has charge of the buildings and grounds should be subordinate to the superintendent of schools. He should be appointed by the board of education upon the recommendation of the superintendent of schools, to whom he should be directly responsible.

Adapt Organization to City Size

The size of the school system will determine the plan of organization that is best adapted so far as the number of required officials is concerned. In large cities, there will be needed a superintendent of buildings and grounds, with a considerable staff of personnel and supervisory officials. In small cities, this official alone, or with but one or two assistants, will have to perform all of the duties connected with the oversight of the care and operation of school buildings. In villages, these duties will fall to the superintendent of schools, with the assistance of the building principals. In any case, the duties to be performed by such officials will be practically the same in school systems of any size. The necessity for the larger organization in large cities arises from the physical impossibility of the performance of all the necessary duties by one official because of the greater number of buildings and janitorial-engineering employees.

The Superintendent of Buildings and Grounds. This is probably the most common designation of the official appointed to assume the responsibility for the care and operation of school buildings. Other titles are frequently given to the official who acts in this capacity. Among these are chief engineer, supervisor of janitors, city-school custodian, superintendent of plant operations, assistant superintendent in charge of business affairs, supervisor of buildings, business manager, and secretary of the board of education. Some of these titles suggest other duties which may require much of the time and attention of the official who has charge of the janitors and engineers of school buildings.

To Whom are Janitor-Engineers Responsible? In an analysis of the rules and regulations of boards of education, janitor-engineers are found to be most frequently responsible to building principals. Next in order are the officials in charge of buildings and grounds, the superintendent of schools, the board of education, and teachers. Some of the rules and regulations assign responsibility to more than one authority. The number of authorities to whom janitor-engineers are responsible follows:

None designated.....	7
To one authority.....	20
To two authorities.....	24
To three authorities.....	27
To four authorities.....	13
To five authorities.....	4

To Whom is Janitor Responsible?

Some of the statements of responsibility are general. Specific authority is usually invested in the building principal and some such official as the superintendent of buildings and grounds.

Garber¹ found that janitor-engineers were responsible to the following authorities:

To the board of education or one of its committees.....	125
To the superintendent of schools.....	530
To the superintendent of buildings or similar official.....	82
To building principals.....	167
To building principals and superintendent.....	117
To the business manager of secretary of the board	30
To supervising principals.....	10
To teachers.....	2
To truant officer.....	1
To "no one".....	1

There can be little question but that janitor-engineers should be directly responsible to the superintendent of schools, or some subordinate officer, such as the superintendent of buildings and grounds. Dr. E. E. Lewis,² formerly superintendent of schools at Flint, Michigan, in a speech before the Missouri State School Administrative Association, stated a condition which frequently prevails. He said:

"In my own city I don't have anything to say about the janitors; technically speaking, there is a dual system that grew up over a period of years whereby the business manager is directly responsible to the board of education, and entirely independent of the superintendent. The janitors and engineers are directly under the business department. It is a very inefficient, unnecessary, illogical method of organizing the personnel of the school system. There ought to be one head and that should be the superintendent, and through the superintendent authority should be delegated to an assistant superintendent in charge of business affairs, who should handle the questions of engineers and janitors and supplies and finances, and so on."

The main control of janitorial-engineering service should be vested in the superintendent of buildings and grounds, but the principal's authority over all activities of his building should be recognized by all. Under such a system of double responsibility, trouble sometimes results, but despite the fact that the division of authority is often not clearly defined, it is surprising how well a coöperative, tactful, and industrious janitor-engineer can work. The principal is usually satisfied if the results of the operation and care of his building are good. The superintendent of buildings and grounds seldom interferes with those phases of the work which have the closest relationship to the educational function.

The Supervision of Janitorial-Engineering Service

Supervision by the Principal. The principal is a busy man, with his duties as administrator of his school and supervisor of his teacher, and will tend to supervise, only incidentally, the janitorial-engineering service of his school. Such supervision is not adequate. He should make

¹Garber, J. A., *The School Janitor*, pp. 19-20. Bulletin No. 24, 1922. Bureau of Education.

²Lewis, E. E., "The Care of School Buildings," University of Missouri. *Proceedings of the Thirteenth Annual Meeting, Missouri State School Administrative Association*, Bulletin 27, No. 24, Education Series, No. 22. 1926, p. 65.

special tours of inspection to observe the condition of various parts of his building. On such tours of inspection he should observe the cleanliness of floors, whether blackboards, erasers, and chalk trays are clean, whether furniture has been dusted, whether windows are dirty, whether toilet rooms are clean and odorless, whether room temperatures and air conditions are right, and numerous other conditions that affect the educational work of the school.

If conditions as he finds them are not such as to promote the educational process, it is his duty to see that the janitorial-engineering staff makes them right. He may not be qualified to show the janitor-engineers how to do their work, but his authority to demand results in his building cannot be questioned.

The principal has the further duty of keeping the janitorial and teaching staffs harmonious. He should have the authority to settle, impartially, any disputes that arise between members of these staffs. It is a very unsatisfactory condition where the principal has no authority over the janitorial-engineering force. This, however, is the situation in a number of large cities.

Coöperation between janitor-engineers and teachers is largely a matter of mutual understanding. Each should have the opportunity of seeing matters from the other's viewpoint. For this reason principals sometimes invite the head janitor-engineer to attend faculty meetings. In such meetings there is, of course, discussion of much that does not concern the janitorial-engineering department, but, on the other hand, there will be, or may be, discussion of much that does concern it. An occasional invitation to the head janitor-engineer to attend such meetings is good policy, for by such means the head janitor-engineer will get a better conception of the educational problems as they relate to his service. He will have a better idea of the problems of the faculty, and the faculty will become better acquainted with his difficulties. This plan should make for a more friendly and coöperative relationship between the two groups of school employees, who are so frequently antagonistic. The head janitor-engineer, at the request of the principal, can make his attendance at faculty meetings an opportunity for presenting many matters to the faculty as a group which he would not like to present, nor have the authority to present, to individual teachers.

The Principal's Job

As an educational function, the principal should make janitor-engineers feel their relationship to the educational process. All too often, gossiping members of the community go to the janitor-engineer for material upon which to base the exaggerations they pass on to others. The principal must imbue his janitor-engineers with a feeling of loyalty and enthusiasm for the school. Then they will speak only good of it in the community of which they are a part.

In case the head janitor-engineer and the building principal are not congenial, the head janitor-engineer should be transferred to another building. This is true regardless of who may be right in matters of dispute. This may seem to be somewhat unfair to the janitor-engineer, but the educational function of the school must first be served, and bad conditions arising from clashes between these officials cannot be allowed to continue. In the main, principals hesitate to complain unjustly of a janitor-engineer. Where they do so they soon discover

that it is difficult to secure good janitor-engineers, for trouble-making principals are soon identified by all janitor-engineers of the system.

The Superintendent of Buildings and Grounds as Supervisor. While building principals should be given local control over janitors, engineers, and assistants in respect to all of those phases of janitorial-engineering service which affect the educational efficiency of school buildings, this does not mean that they should supervise the technical and skilled phases of such work. That duty should be performed by the school administrator, or his staff, who has general charge of the school buildings of a city.

Supervision of the skilled phases of janitorial-engineering service by expert supervisors is a common practice in cities having the best forms of organization. For example, one superintendent writes:

"We have, in P. . . ., a very satisfactory arrangement. All janitors, firemen, charwomen, and mechanics are under the direct supervision of our supervisor of buildings and grounds. This official was formerly a janitor in one of our schools and knows the work from the ground up. All janitors are employed on his recommendation and are under his control. He supervises their work closely, issues all janitors' supplies, and is responsible for the physical condition of the buildings and grounds, and the elimination of waste in heating, janitors' supplies, etc."

The secretary and purchasing agent of another school system writes: "We have one head man who superintends the entire system and one building foreman in our largest elementary school. These men make the assignments and outline the work and are responsible for its execution."

Supervision for Improvement of Service

Originally supervision meant oversight or inspection. The work has now come to have wider implications. In its broadest meaning, supervision includes all of the activities in which the supervisor engages for improving the work of those supervised. It should include, but extend much further than mere inspection. It must aim to improve the janitorial-engineering service by direct contact with those who care for school buildings and operate their equipment.

The supervisor of janitor-engineers, whether he be the superintendent of buildings and grounds, or one of his assistants, will have charge of all agencies operating to improve their work; the training courses, the planning of demonstrations, and visits to other schools, the making of work schedules, and the like. He should have knowledge and skill in the effective performance of various jobs to enable him to correct individual difficulties as he goes from school to school in connection with his supervisory duties.

It is essential that the supervisor of janitor-engineers apply the principles that apply to the supervision of teachers. Such a supervisor must be sympathetic, friendly, and helpful, rather than critical of those whom he would supervise. Mere suggestion may be sufficient to secure the best efforts of one man, while another may need definite instructions. Yet, both may become efficient in their work, if helped in ways which will encourage them to put forth their best efforts.

Real supervision means constructive leadership, not the imposition of authority from above. It implies that the supervisor will be qualified, both by nature and training, to give that leadership. It implies ability, on the part of the supervisor, to diagnose difficulties that exist in caring for a particular building and to suggest, or even demonstrate, sound remedial procedures. Supervision implies an ability of the supervisor to give expert help to the janitor-engineer, both for problems the janitor-engineer has discovered and for problems brought to his attention by the supervisor.



R. B. IRONS
Superintendent of Schools
Mason City, Iowa

Mr. R. B. Irons, who was recently elected superintendent of schools at Mason City, Iowa, is a graduate of Wabash College, Crawfordsville, Ind. He completed his postgraduate work at the University of Chicago and the University of South Dakota, and also spent three summers at Teachers College, Columbia University.

Mr. Irons was for the past ten years superintendent of schools at Winona, Minn. Previously, he was head of the school system at Rapid City, S. Dak., for eight years, principal of the high school at Huron, S. Dak., and also spent two years in the schools of Aberdeen, S. Dak.

Supervisor Must be Helpful

Brief visits doubtless have some value, but real supervision, which comes from an understanding of the problems peculiar to a particular building, requires a better knowledge of the situation than can be secured through such visits. The supervisor may find it necessary to spend many days in a single building. As supervisor he is not primarily an inspector, nor a detective, nor a dictator or czar. He is a supervisor in order that he may help his janitor-engineers to improve their work, to economize their time and energy, and to help them in planning their work.

The supervisor must obtain the confidence of his janitor-engineers. In his visits he must be welcomed as a friend. He must not impose his methods upon the janitor-engineer. His attitude must be, "We are learners together." The supervisor should demonstrate whenever possible. He should try out various methods while the janitor times his work. The janitor should try out methods while the supervisor keeps time records. Sometimes he will say to the janitor-engineer, "John, go over to the Washington School and see Bill wash windows. See whether he uses the

chamois to wash them and the them, or whether he uses the cloth and the chamois to dry them. I let him time you by your method with him and see if you two find out which is the better method."

The Rating of Janitor-Engineers. 16 cities reporting ratings to janitor-engineers were made by the principals, while in 6, the superintendent and grounds rated these employees. Accurate ratings can be given by the principal, or his assistants, who supervise engineering service. However, certain such as the personal qualities of janitor-engineers, can doubtless best be rated by building principals. A rating card, filled out by both the building principal and the supervisor of janitorial service, with some plan of combining the ratings would give the most accurate evaluation of various employees and their work.

Ratings are made weekly, most semester, or for the year. It is doubtful that such ratings would change greatly week, or from month to month. Yearly, ratings should be sufficient for supervision, promotion, and the other things that arise in accordance with merit.

Summary

1. The superintendent of buildings and grounds, or other official in general charge of janitorial-engineering service, should be responsible to the superintendent of schools for the board of education.
2. The plan of organization of janitorial service in charge of the operation of school buildings should vary with the needs of the city.
3. Janitor-engineers should be under the immediate authority of the superintendent of buildings and grounds and the principal.
4. The principal's duty as supervisor is to demand that the service be of such a character as to promote the educational function of the school and to secure harmony and cooperation between the teaching and janitorial staffs.
5. The duty of the superintendent of buildings and grounds, as supervisor, is to see that janitor-engineers perform their work efficiently, and with greater economy of time, energy, and expense.
6. Janitor-engineers should be under the supervision of the superintendent of buildings and grounds and the principal. The items on the rating card should be the same for all cities. These officials may slightly differ. The ratings should be combined for the year.

*See Reeves, C. E. and Ganders, H. S., *School Management*, pp. 38-9; 332-4. Bureau of Public Administration, Columbia University, New York.

Sawing Wood

A. J. Huggett, Superintendent of Schools, Lake Orion, Mich.

A popular writer tells us in a recent magazine article¹ that "it is hard work to earn your living in your spare time." He goes on to say that "if a man spends five days out of the week attending meetings of committees, being on boards of governors of clubs, preparing and making after-dinner speeches, acting on boards of education, soliciting funds for a hospital, collecting postage stamps, reading detective stories, and generally running around in unproductive circles — then he has to work like the very dickens the other two days trying to make a living."

The editor adds a note about a man that he used to know in school. This individual was

¹Clarence Budington Kelland, "This Kind of Glory is Mostly Bunk," *American Magazine*, May, 1930.

voted "the man most likely to succeed." Yet, he has not succeeded for himself. He has been too busy running things for other people.

Statements like these cannot help schoolmen in executive positions. They are contrary to widely held educational public-relations theories. I wonder if schoolmen are not, in a way, guilty of just these things? Do we leave two days a week left in which to do our work? Are some of us losing out because we are too busy running things for other people? Are we unsatisfied because we are trying to run our schools in our spare time?

(Continued on Page 136)

Administration of Janitorial-Engineering Service-VI

H. S. Ganders, University of Syracuse, Syracuse, N. Y.

C. E. Reeves, Elmira College, Elmira, N. Y.

(Conclusion of Series)

THE PLAN OF ORGANIZATION

The plan of organization of the department having charge of janitorial-engineering service varies greatly from city to city. In one city, the official in charge of the janitor-engineers may be directly responsible to the board of education, or even to the city council. In another, he may have the status of an assistant superintendent, responsible directly to the superintendent of schools; while in still another he may have the status of a supervisor, responsible to the superintendent of schools, or to an assistant superintendent. In some cities, there are social subordinate officials, having charge of janitorial-engineering service, and responsible directly to some chief official, perhaps with the designation superintendent of buildings and grounds, or superintendent in charge of business affairs, and having the status of an assistant superintendent.

The fact that schools are operated primarily for the education of children should always be kept in mind. For this reason, the official who has charge of the buildings and grounds should be subordinate to the superintendent of schools. He should be appointed by the board of education upon the recommendation of the superintendent of schools, to whom he should be directly responsible.

Adapt Organization to City Size

The size of the school system will determine the plan of organization that is best adapted so far as the number of required officials is concerned. In large cities, there will be needed a superintendent of buildings and grounds, with a considerable staff of personnel and supervisory officials. In small cities, this official alone, or with but one or two assistants, will have to perform all of the duties connected with the oversight of the care and operation of school buildings. In villages, these duties will fall to the superintendent of schools, with the assistance of the building principals. In any case, the duties to be performed by such officials will be practically the same in school systems of any size. The necessity for the larger organization in large cities arises from the physical impossibility of the performance of all the necessary duties by one official because of the greater number of buildings and janitorial-engineering employees.

The Superintendent of Buildings and Grounds. This is probably the most common designation of the official appointed to assume the responsibility for the care and operation of school buildings. Other titles are frequently given to the official who acts in this capacity. Among these are chief engineer, supervisor of janitors, city-school custodian, superintendent of plant operations, assistant superintendent in charge of business affairs, supervisor of buildings, business manager, and secretary of the board of education. Some of these titles suggest other duties which may require much of the time and attention of the official who has charge of the janitors and engineers of school buildings.

To Whom are Janitor-Engineers Responsible? In an analysis of the rules and regulations of boards of education, janitor-engineers are found to be most frequently responsible to building principals. Next in order are the officials in charge of buildings and grounds, the superintendent of schools, the board of education, and teachers. Some of the rules and regulations assign responsibility to more than one authority. The number of authorities to whom janitor-engineers are responsible follows:

None designated.....	7
To one authority.....	20
To two authorities.....	24
To three authorities.....	27
To four authorities.....	13
To five authorities.....	4

To Whom is Janitor Responsible?

Some of the statements of responsibility are general. Specific authority is usually invested in the building principal and some such official as the superintendent of buildings and grounds.

Garber¹ found that janitor-engineers were responsible to the following authorities:

To the board of education or one of its committees.....	125
To the superintendent of schools.....	530
To the superintendent of buildings or similar official.....	82
To building principals.....	167
To building principals and superintendent.....	117
To the business manager or secretary of the board.....	30
To supervising principals.....	10
To teachers.....	2
To truant officer.....	1
To "no one".....	1

There can be little question but that janitor-engineers should be directly responsible to the superintendent of schools, or some subordinate officer, such as the superintendent of buildings and grounds. Dr. E. E. Lewis,² formerly superintendent of schools at Flint, Michigan, in a speech before the Missouri State School Administrative Association, stated a condition which frequently prevails. He said:

"In my own city I don't have anything to say about the janitors; technically speaking, there is a dual system that grew up over a period of years whereby the business manager is directly responsible to the board of education, and entirely independent of the superintendent. The janitors and engineers are directly under the business department. It is a very inefficient, unnecessary, illogical method of organizing the personnel of the school system. There ought to be one head and that should be the superintendent, and through the superintendent authority should be delegated to an assistant superintendent in charge of business affairs, who should handle the questions of engineers and janitors and supplies and finances, and so on."

The main control of janitorial-engineering service should be vested in the superintendent of buildings and grounds, but the principal's authority over all activities of his building should be recognized by all. Under such a system of double responsibility, trouble sometimes results, but despite the fact that the division of authority is often not clearly defined, it is surprising how well a cooperative, tactful, and industrious janitor-engineer can work. The principal is usually satisfied if the results of the operation and care of his building are good. The superintendent of buildings and grounds seldom interferes with those phases of the work which have the closest relationship to the educational function.

The Supervision of Janitorial-Engineering Service

Supervision by the Principal. The principal is a busy man, with his duties as administrator of his school and supervisor of his teacher, and will tend to supervise, only incidentally, the janitorial-engineering service of his school. Such supervision is not adequate. He should make

¹Garber, J. A., *The School Janitor*, pp. 19-20. Bulletin No. 24, 1922. Bureau of Education.

²Lewis, E. E., "The Care of School Buildings," University of Missouri. *Proceedings of the Thirteenth Annual Meeting, Missouri State School Administrative Association*, Bulletin 27, No. 24. Education Series, No. 22. 1926, p. 65.

special tours of inspection to observe the condition of various parts of his building. On such tours of inspection he should observe the cleanliness of floors, whether blackboards, erasers, and chalk trays are clean, whether furniture has been dusted, whether windows are dirty, whether toilet rooms are clean and odorless, whether room temperatures and air conditions are right, and numerous other conditions that affect the educational work of the school.

If conditions as he finds them are not such as to promote the educational process, it is his duty to see that the janitorial-engineering staff makes them right. He may not be qualified to show the janitor-engineers how to do their work, but his authority to demand results in his building cannot be questioned.

The principal has the further duty of keeping the janitorial and teaching staffs harmonious. He should have the authority to settle, impartially, any disputes that arise between members of these staffs. It is a very unsatisfactory condition where the principal has no authority over the janitorial-engineering force. This, however, is the situation in a number of large cities.

Coöperation between janitor-engineers and teachers is largely a matter of mutual understanding. Each should have the opportunity of seeing matters from the other's viewpoint. For this reason principals sometimes invite the head janitor-engineer to attend faculty meetings. In such meetings there is, of course, discussion of much that does not concern the janitorial-engineering department, but, on the other hand, there will be, or may be, discussion of much that does concern it. An occasional invitation to the head janitor-engineer to attend such meetings is good policy, for by such means the head janitor-engineer will get a better conception of the educational problems as they relate to his service. He will have a better idea of the problems of the faculty, and the faculty will become better acquainted with his difficulties. This plan should make for a more friendly and cooperative relationship between the two groups of school employees, who are so frequently antagonistic. The head janitor-engineer, at the request of the principal, can make his attendance at faculty meetings an opportunity for presenting many matters to the faculty as a group which he would not like to present, nor have the authority to present, to individual teachers.

The Principal's Job

As an educational function, the principal should make janitor-engineers feel their relationship to the educational process. All too often, gossiping members of the community go to the janitor-engineer for material upon which to base the exaggerations they pass on to others. The principal must imbue his janitor-engineers with a feeling of loyalty and enthusiasm for the school. Then they will speak only good of it in the community of which they are a part.

In case the head janitor-engineer and the building principal are not congenial, the head janitor-engineer should be transferred to another building. This is true regardless of who may be right in matters of dispute. This may seem to be somewhat unfair to the janitor-engineer, but the educational function of the school must first be served, and bad conditions arising from clashes between these officials cannot be allowed to continue. In the main, principals hesitate to complain unjustly of a janitor-engineer. Where they do so they soon discover

that it is difficult to secure good janitor-engineers, for trouble-making principals are soon identified by all janitor-engineers of the system.

The Superintendent of Buildings and Grounds as Supervisor. While building principals should be given local control over janitors, engineers, and assistants in respect to all of those phases of janitorial-engineering service which affect the educational efficiency of school buildings, this does not mean that they should supervise the technical and skilled phases of such work. That duty should be performed by the school administrator, or his staff, who has general charge of the school buildings of a city.

Supervision of the skilled phases of janitorial-engineering service by expert supervisors is a common practice in cities having the best forms of organization. For example, one superintendent writes:

"We have, in P. . . ., a very satisfactory arrangement. All janitors, firemen, charwomen, and mechanics are under the direct supervision of our supervisor of buildings and grounds. This official was formerly a janitor in one of our schools and knows the work from the ground up. All janitors are employed on his recommendation and are under his control. He supervises their work closely, issues all janitors' supplies, and is responsible for the physical condition of the buildings and grounds, and the elimination of waste in heating, janitors' supplies, etc."

The secretary and purchasing agent of another school system writes: "We have one head man who superintends the entire system and one building foreman in our largest elementary school. These men make the assignments and outline the work and are responsible for its execution."

Supervision for Improvement of Service

Originally supervision meant oversight or inspection. The work has now come to have wider implications. In its broadest meaning, supervision includes all of the activities in which the supervisor engages for improving the work of those supervised. It should include, but extend much further than mere inspection. It must aim to improve the janitorial-engineering service by direct contact with those who care for school buildings and operate their equipment.

The supervisor of janitor-engineers, whether he be the superintendent of buildings and grounds, or one of his assistants, will have charge of all agencies operating to improve their work: the training courses, the planning of demonstrations, and visits to other schools, the making of work schedules, and the like. He should have knowledge and skill in the effective performance of various jobs to enable him to correct individual difficulties as he goes from school to school in connection with his supervisory duties.

It is essential that the supervisor of janitor-engineers apply the principles that apply to the supervision of teachers. Such a supervisor must be sympathetic, friendly, and helpful, rather than critical of those whom he would supervise. Mere suggestion may be sufficient to secure the best efforts of one man, while another may need definite instructions. Yet, both may become efficient in their work, if helped in ways which will encourage them to put forth their best efforts.

Real supervision means constructive leadership, not the imposition of authority from above. It implies that the supervisor will be qualified both by nature and training, to give that leadership. It implies ability, on the part of the supervisor, to diagnose difficulties that exist in caring for a particular building and to suggest, or even demonstrate, sound remedial procedures. Supervision implies an ability of the supervisor to give expert help to the janitor-engineer, both for problems the janitor-engineer has discovered and for problems brought to his attention by the supervisor.



R. B. IRONS
Superintendent of Schools
Mason City, Iowa

Mr. R. B. Irons, who was recently elected superintendent of schools at Mason City, Iowa, is a graduate of Wabash College, Crawfordsville, Ind. He completed his postgraduate work at the University of Chicago and the University of South Dakota, and also spent three summers at Teachers College, Columbia University.

Mr. Irons was for the past ten years superintendent of schools at Winona, Minn. Previously, he was head of the school system at Rapid City, S. Dak., for eight years, principal of the high school at Huron, S. Dak., and also spent two years in the schools of Aberdeen, S. Dak.

Supervisor Must be Helpful

Brief visits doubtless have some value, but real supervision, which comes from an understanding of the problems peculiar to a particular building, requires a better knowledge of the situation than can be secured through such visits. The supervisor may find it necessary to spend many days in a single building. As supervisor he is not primarily an inspector, nor a detective, nor a dictator or czar. He is a supervisor in order that he may help his janitor-engineers to improve their work, to economize their time and energy, and to help them in planning their work.

The supervisor must obtain the confidence of his janitor-engineers. In his visits he must be welcomed as a friend. He must not impose his methods upon the janitor-engineer. His attitude must be, "We are learners together." The supervisor should demonstrate whenever possible. He should try out various methods while the janitor times his work. The janitor should try out methods while the supervisor keeps time records. Sometimes he will say to the janitor-engineer, "John, go over to the Washington School and see Bill wash windows. See whether he uses the

chamois to wash them and the cloth to dry them, or whether he uses the cloth to wash them and the chamois to dry them. Time him and let him time you by your method. Talk it over with him and see if you two men can't find out which is the better method."

The Rating of Janitor-Engineers. In 10 of 16 cities reporting ratings to janitor-engineers, the ratings were made by the building principals, while in 6, the superintendent of buildings and grounds rated these employees. The most accurate ratings can be given by the latter official, or his assistants, who supervise janitorial-engineering service. However, certain matters, such as the personal qualities of janitor-engineers, can doubtless best be rated by the building principals. A rating card for each employee, filled out by both the building principal and the supervisor of janitorial-engineering service, with some plan of combining the results, would give the most accurate evaluation of the various employees and their work.

Ratings³ are made weekly, monthly, for each semester, or for the year. It is doubtful whether such ratings would change greatly from week to week, or from month to month. Semester, or yearly, ratings should be sufficient for purposes of supervision, promotion, and the fixing of salaries in accordance with merit.

Summary

1. The superintendent of buildings and grounds, or other official in general charge of janitorial-engineering service, should be directly responsible to the superintendent of schools, and through him to the board of education.

2. The plan of organization of the department in charge of the operation and care of school buildings should vary with the size of city.

3. Janitor-engineers should be under the double immediate authority of the superintendent of buildings and grounds and the building principal.

4. The principal's duty as supervisor is to demand that the service be of such quality as to promote the educational function of the school and to secure harmony and cooperation between the teaching and janitorial forces.

5. The duty of the superintendent of buildings and grounds, as supervisor, is to help janitor-engineers to perform their work more efficiently, and with greater economy of time, energy, and expense.

6. Janitor-engineers should be rated by the superintendent of buildings and grounds, or certain members of his staff, and by building principals. The items on the rating cards used by these officials may slightly differ. The results of the ratings should be combined for a final rating.

³See Reeves, C. E. and Ganders, H. S., *School Building Management*, pp. 38-9; 332-4. Bureau of Publications, Teachers College, Columbia University, New York.

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A. J. Huggett, Superintendent of Schools, Lake Orion, Mich.

A popular writer tells us in a recent magazine article¹ that "it is hard work to earn your living in your spare time." He goes on to say that "if a man spends five days out of the week attending meetings of committees, being on boards of governors of clubs, preparing and making after-dinner speeches, acting on boards of education, soliciting funds for a hospital, collecting postage stamps, reading detective stories, and generally running around in unproductive circles — then he has to work like the very dickens the other two days trying to make a living."

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Statements like these cannot help but give schoolmen in executive positions food for thought. They are contrary to widely advocated educational public-relations theories. And yet, I wonder if schoolmen are not, in some cases, guilty of just these things? Do we have only two days a week left in which to do our jobs? Are some of us losing out because we have too many irons in the fire? Are we unsuccessful because we are trying to run our schools in our spare time?

(Continued on Page 136)

Status of the Income Tax as a Source of State School Revenue

Prof. Fletcher Harper Swift, Berkeley, California

Failure of the General Property Tax

The tax most widely used in the United States for providing funds, both state and local, is the general property tax. This is true despite the fact that the general property tax stands condemned today not only by every leading authority in the field of taxation, but by numerous state tax commissions consisting of men eminent in business and public affairs. Prof. Edwin R. A. Seligman, of Columbia University, in his work, *Essays in Taxation* (p. 62), writes: "Practically, the general property tax, as actually administered today, is, beyond all doubt, the worst tax known to the civilized world. . . . It put a premium on dishonesty and debauches the public conscience; it presses hardest on those least able to pay; it imposes double taxation on one man and grants immunity to the next. In short, the general property tax is so flagrantly inequitable that its retention can be explained only through ignorance or inertia."

The special tax commission of the State of Georgia, in 1919, stated in its report to the Governor that "the commission, after its investigation, believes that the system now in use is a failure (i.e., the general property tax), and concludes by recommending an amendment to the Constitution that would permit the levying of 'taxes' on incomes, inheritances, privileges, and occupations, which classes of taxes may be graduated, and when levied may contain provisions for reasonable exemptions."

The Georgia commission adduces the following reasons in support of the proposed amendment: "We have reached the above conclusion because we find that the provision of our law requiring property of every kind and character to be taxed at the same rate is condemned by (1) practically all students of the science of taxation; (2) practically all the heads of federal and state tax departments; (3) practically all of the more than 100 special-tax commissions; (4) the United States Supreme Court; (5) the National Tax Association; (6) the experience of Europe, England, and our own States, all of which have tried it and about half of which have so modified it as to adapt it to modern conditions."

The tax commission of Ohio, after 15 months' investigation of the general property tax, summarized its findings in the following statement of facts: (1) It punishes the honest; (2) it rewards the dishonest; (3) it results frequently in double taxation; (4) it is unjust to the owners of all other property; (5) it lowers the standard of integrity.

Quest for New Sources of Public Revenue

The evils universally and inevitably attending the general property tax, the need for greatly increased public revenues, and an increasing appreciation of the principles of sound taxation are some of the most important causes which have led to a quest for new sources of school revenue and to the creation of certain new types of taxes. To the three causes just named, must be added certain far-reaching social and economic changes. The tendency of our national industrial life away from what were once almost exclusively agricultural occupations to an industrial life in which an increasingly large proportion of activities are devoted to manufacturing and commerce, has brought about a transformation in the character and the form of property and wealth. Formerly wealth was represented almost entirely by real and personal property; today wealth and property are largely corporate and many forms of income derived from sources other than tangible property can be made to contribute their just quota to public expenditures only by means of some special form of taxation. Possession of real or personal

property is in many cases no longer the truest index of ability or obligation to support governmental undertakings. Frequently a much truer index is the possession of income whether received as a salary or derived from intangible property such as stocks and bonds. Such is the situation which is leading our states to give more and more serious attention to the possibility of adopting new types of taxation. Of these newer types the most significant and the most promising are income taxes, corporation taxes, inheritance taxes, occupation taxes, and severance taxes.

State Income Taxes for Schools

Under the graduated personal income tax as usually administered today, small incomes are totally exempt. Beginning with a low rate of taxation on the smallest incomes subject to a tax, the rate is gradually increased as the income increases. The graduated income tax is universally regarded by all authorities in the field of public finance as one of the fairest and soundest taxes in existence. It has been advocated by both national and state tax associations, commissions, and officials. The Louisiana Tax Commission in a recent report writes: "The income tax is the most defensible of all forms of taxation because it compels no one to pay who has not the means to pay. It is the least transferable of all tax burdens. It is not easily shifted as many other tax devices are."

The movement toward the adoption of the income tax as a source of state revenue, which appeared to be well under way, was undoubtedly given a distinct setback by the Federal Act of 1913 which provided for a Federal income tax and by the subsequent Federal Acts of 1916, 1917, and 1918, which increased the rates of the Federal tax. Nevertheless, it should be noted that it was after the Federal Government had entered upon the policy of levying income taxes that at least three states, Massachusetts in 1916, North Carolina in 1920, and Arkansas in 1923, provided for the levying of state income taxes, and one state, Mississippi, revised and greatly increased her rates. As will be noted later, the system provided by Arkansas was thoroughly unsound and was repealed in 1925. On the other hand, Mississippi which since 1912 had had an unsatisfactory income tax law yielding approximately \$35,000 per annum, in 1924 revised this law with the result that in 1925 there was collected for the nine months ending December 31, 1924, \$1,067,000 and in 1926 for the calendar year 1925, \$2,200,000.¹

Jensen writes: "There is no serious objection to local income taxes in addition to the Federal tax. The argument sometimes offered that this is double taxation, carries no weight once we grant the right of both the federal and state governments to tax. The Federal income tax in no way militates against state and local income taxes; on the contrary it should facilitate the local administration, especially if a system of exchange of information between the federal and the state authorities could be developed."²

Classification of Income Tax States

In 1923, Wittee made the following classification of states levying income taxes:³

a) Combined personal and corporation income tax laws: Mississippi, Missouri, North Carolina, North Dakota, Oregon (repealed 1923), Virginia, Wisconsin, South Carolina.

b) Personal income tax laws and distinct corporation income tax laws: Massachusetts and New York.

¹Data furnished by Cecil E. Inman, Mississippi State Tax Commissioner, in a letter to author dated January 29, 1927.

²Jens P. Jensen, *Problems of Public Finance*, pp. 379-380.

³Wittee, E. E., "Summary of Some Features of the Federal and State Income Tax Laws and of the Model Personal Income Tax Law promulgated by the National Tax Association," *Bulletin of the National Tax Association*, November, 1923.

c) Personal income tax laws but no corporation income tax: Arkansas (repealed 1925), Delaware, and Oklahoma.

d) Corporation income tax laws but no personal income tax: Connecticut, Montana, Tennessee. (Several other states tax special kinds of corporations on the income basis but not general business corporations.)

As indicated in the above summary, two states, Arkansas and Oregon, have repealed their income tax laws since Wittee made his summary, leaving fourteen states which are reported to be levying income taxes at the present time. Of these fourteen, eight, namely Delaware, Massachusetts, Mississippi, Missouri, New York, North Carolina, Tennessee, and Wisconsin, depend upon the proceeds of the income tax as a source of state school support. Arkansas may well be included in our consideration for reasons which will be evident. Of the states just mentioned, only five, Delaware, Massachusetts, Missouri, Tennessee, and Wisconsin, give the schools a definite claim on all of or a portion of the proceeds of the state income tax. However, in Mississippi and North Carolina the present income tax system was inaugurated with the definite purpose of providing school revenue, and New York, by her method of distributing the proceeds, makes it possible for a certain portion of the same to be expended for schools.

The Arkansas Failure

Arkansas. Act 345, Acts of Arkansas 1923, provided for levying a state income tax of .1 of 1 per cent "on the gross income of every resident of the state . . . for the sole use and benefit of the public schools of Arkansas and for other purposes." This tax was held to be void by the state supreme court because, being a gross income tax, it operated unequally and because there was no express authority in the state constitution for such an impost. Whether or not the reasons of the court were sound, the fact remains that in levying an income tax upon gross income rather than upon net income, Arkansas was evidently laying open the way for grave injustice, and the act was repealed in 1925. However, the enactment of the Arkansas income tax law and its repeal may be regarded as significant from three standpoints: (1) as a recognition of the soundness of the income tax; (2) as a witness to the folly of attempting to levy a tax on gross income; (3) as a witness to the folly of levying an income tax of a rate so low as to make its collection not worth while when measured against the irritation produced by such a tax.

Delaware. Delaware levies a graduated personal income tax specifically to provide school revenues and devotes the entire proceeds to schools. The rate varies from 1 per cent on net incomes not in excess of \$3,000 to 3 per cent on incomes in excess of \$10,000.

Schools Have First Claim in Massachusetts

Massachusetts. Massachusetts, by an act approved July 24, 1919 (General Acts, 1919, chap. 363), provided for an annual current "general school fund" to be derived from the proceeds of a state income tax. The fund provided for by this act is not a definite amount, but is to be a sum sufficient to finance the projects described in Part I of the act, and to be available for maintaining these projects without further legislation.

In Massachusetts, all the proceeds of the state income tax are paid into the state treasury, but the schools have first claim upon the fund thus established. After meeting the claims of individual school districts (towns and cities)

the balance, amounting to about three fourths of the fund, is returned to the local communities. Thus three fourths of the fund becomes in actual practice a local source of revenue. In this instance, the state has full right to the entire proceeds of the income tax, if the entire proceeds should be needed to meet the needs of the state, but when the entire proceeds are not needed for projects to be financed by the state, the balance is returned to the towns and cities in proportion to the state general property tax imposed upon each. In 1921, 64 per cent was thus returned, and in 1926, 77.4 per cent. Undoubtedly a considerable proportion of the funds thus returned is appropriated for schools by the towns and cities.

Missouri. Missouri devotes to public schools one third of all moneys credited to the state general revenue fund. The income tax is the most important of all sources contributing to this fund, providing in the year 1925-26, 35.2 per cent of this fund.

The New York Law

New York. New York levies a personal income tax of 1 per cent on amounts not exceeding \$10,000; 2 per cent on amounts above \$10,000, and not exceeding \$50,000; and 3 per cent on amounts in excess of \$50,000. Certain exemptions are allowed, beginning with a personal exemption of \$1,000 in the case of a single person, or in the case of a head of a family or a married person living with husband or wife, a personal exemption of \$2,500 unless the net income is in excess of \$5,000, in which case the personal exemption shall be \$2,000. Additional exemptions are allowed for children and other dependents.⁴

The tax is collected by agents who are appointed by the state tax commission and are required to give bond. Of the revenue collected from the income tax, the comptroller retains \$250,000 out of which to pay any refunds to which taxpayers may be entitled; of the balance, 50 per cent is paid into the state treasury to the credit of the general fund, and the remaining 50 per cent is paid to the treasurers of the several counties in the proportion that the assessed valuation of real property in each bears to the aggregate assessed valuation of real property in the state.

The amount paid to the county is distributed among the cities and towns therein, in proportion to the assessed valuation of real property in each as compared with the aggregate assessed valuation of real property in the county. . . . A town, with the approval of the town board, may distribute not to exceed one third of its allotment among the several school districts in the town according to the proportionate amount of real property in each school district, but the amount so distributed shall not exceed in any one year one fourth of the amount received from taxation for school purposes in such district. The balance is used by the town for general town purposes.⁵

The already-cited provisions are those of the law in force in 1923. In 1924 an act was passed allowing a reduction of 25 per cent of the personal income tax with respect to rates due during the calendar year, 1924, chargeable against the state's share of the tax. Again in 1925 a similar act was passed.

How North Carolina Law Operates

North Carolina. North Carolina levies no state school tax, but maintains three state school funds: (1) the permanent common-school fund known as the Literary Fund, set aside in 1903 as a building-loan fund and amounting in 1922 to \$1,280,000; (2) a spe-



IRWIN T. CATHARINE
Superintendent of Buildings
Board of Education, Philadelphia, Pa.

Mr. Catharine, who was recently appointed superintendent of school buildings, to succeed Mr. Cassell, is a graduate of the School of Architects of Drexel Institute, Philadelphia, and holds a B.A. degree in architecture. He entered the service of the Philadelphia board of education as chief draftsman in 1915, and in 1920 became an architect for the school district. The appointment, which became effective on September 1, carries a salary of \$10,000 per year.

cial building fund; (3) a state public-school fund. In 1918, by a constitutional amendment, North Carolina increased her minimum school year from four to six months. It was necessary to provide at once for increased revenues.

In 1919 the legislature enacted a law for levying a state general property tax of 3.2 mills, the proceeds of which were to constitute a state public-school fund. At a general election in 1920 a constitutional amendment was adopted providing for the levying of a state graduated tax on the net incomes of individuals and corporations, the rates varying from 1 to 3 per cent, since increased to from 1 1/4 to 5 per cent. The proceeds of the state income tax, together with those of state taxes on corporations, licenses, and inheritances proved to be enough to enable the state to discontinue the state general property school tax.

In 1921 an act was passed providing that there shall be set aside from the ordinary revenue of the state, a state public-school fund to be used in part as an equalization fund and in part for other educational projects. An act of the same year, provided that no tax on general property in the future shall be levied for any uses of the state government. Since that time the state has levied no general property tax for state purposes.⁶

It has seemed necessary to recount the above events in view of the fact that the income tax in North Carolina is not levied as a school tax. The proceeds of this tax, together with the proceeds of state taxes on franchises, on inheritances, on licenses, and interest from bank balances, constitute the state general fund out of which the state sets aside various funds, including the state public-school fund. The justice of regarding the North Carolina income tax as a state tax created to provide school revenues is evident from the facts already recited and from the further fact that a large proportion of the state general fund is devoted to education. In the year 1925-26 the state general fund amounted to \$12,972,179. Of this total, approximately 47 per cent was derived from income taxes, 22 per cent from corporation taxes, 7 per cent from inheritances, and 9 per cent from licenses. Approximately 15 per cent of this total,

namely \$1,975,250, was credited to the state public-school fund and was disbursed as follows: \$1,500,000 as a state equalization fund for the aid of public schools; of the remainder, \$66,000 for teachers' training fund; \$104,500 for standard rural high schools; the balance for vocational education, rural libraries, state administration and supervision of public schools.

Special Funds Benefited in Tennessee

Tennessee. The laws of Tennessee provide that one third of the gross revenues of the state shall be credited to the state general school fund. All corporations organized for profit are required to pay, in addition to general property taxes and in some cases, privilege taxes, a state tax of 3 per cent on their net earnings. It follows that there should be credited to the general school fund from this source an annual sum equal to 1 per cent on the net earnings of all corporations.

However, the public schools are deprived of a considerable portion of the profits to which they are entitled by law through the policy of allocating state moneys to specific funds and purposes, prior to setting aside the portion due to the public schools.

Wisconsin. The income tax of Wisconsin is a graduated tax levied upon taxable income of individuals, firms, and corporations, the rates varying from 1 1/4 to 6 per cent, depending upon the amount and source of the income.

The proceeds of the state income taxes are distributed as follows: 40 per cent retained by the state; 10 per cent returned to the counties; 50 per cent to the town, city, or village in which the tax was levied and collected, except that in case the balance due any town, city, or village exceeds 2 per cent of the equalized value of the same, such excess shall be paid to the county to be distributed among its several constituent towns, cities, and villages according to their respective school population.

Public schools receive state aid from the state's share of the proceeds of the income tax under three distinct grants: (1) aid to graded schools; (2) aid to high schools; (3) a grant toward the remission of the state general property tax.

After making deductions required by law to pay the cost of administering and collecting the income tax, and to cover state appropriations for special aid to graded schools and high schools, the remainder of the state's share of the proceeds of the income tax "shall be applied as far as it will reach" toward the remission of state general property taxes levied for the benefit of the university, normal, and common schools, in the order named. The total credited to the state general fund for the year 1926, from the proceeds of the income tax, was \$4,793,531.95. Of this amount, a sum slightly in excess of \$3,545,000 was devoted to the support of common schools.

Wisconsin levies a surtax on all incomes in excess of \$3,000, the proceeds of which are credited to the teachers' retirement fund and which, in the year 1926, added to this fund \$1,592,470.

Income Tax Proceeds Devoted to Schools Through Appropriations

Mississippi, New York, and North Carolina give public schools no legal claim on the proceeds of state income taxes. In each of these states the proceeds of income taxes are credited to some state general fund or to the state general receipts from which are made important public-school appropriations. Other states in which income taxes not levied for schools provide funds which ultimately reach the schools at least in part through appropriations, include Connecticut, North Dakota, Oklahoma, and Virginia.

The data presented in the immediate preceding paragraphs are summarized in Table I.

(Concluded on Page 125)

⁴Department of Commerce, Bureau of Census, "Digest of State Laws Relating to Taxation and Revenue, 1922, pp. 310, 311.

⁵Department of Commerce, Bureau of Census, "Digest of State Laws Relating to Taxation and Revenue, 1922, pp. 311, 312.

⁶Fred Wilson Morrison, *Equalization of the Financial Burden of Education Among Counties in North Carolina*, pp. 18-19, 28.

THE AMERICAN School Board Journal

EDITORS:



WM. GEO. BRUCE

WM. C. BRUCE

Industrial Depressions and School Administration

IT is generally assumed that the administration of public education cannot be seriously affected by the economic slump which periodically comes along. It is contended, and properly so, that the schools must go on whether the times are good or bad. The work of educating the youth of the land cannot be impaired. This view of the situation, in the main, holds as good now as it has in the past.

The fact, however, remains that the economic variations which affect the prosperity of the country as a whole are in some manner reflected in the deliberations of school-administrative bodies. The board-of-education member who has found it necessary to make retrenchments in his own business affairs, or to cut his private expenditures, is inclined to approach his public task with greater caution and conservatism. The school budget is more carefully scrutinized, new building projects are more judiciously weighed, proposals for expansion are checked, and a policy of elimination as to nonessentials is fostered.

Then comes the outside reaction. The taxpayers who urge economy is heard; municipal leaders mention tax reduction; retrenchments are proposed; the postponement of building projects is urged; and a reduction in the number of those in public employment is suggested. And yet, on the face of the prevalent evil of unemployment, these proposals are illogical and not altogether wise. Retrenchment here can only intensify the unemployment situation. Much more sensible is the action of school officials, who during the past summer made special appropriations for needed repairs and desirable renovations, and thus afforded some relief to the unemployed.

When it comes to the matter of a reduced teaching force it should be remembered the professional workers, too, are affected. The remarkable fact, as seen from the standpoint of the school administration service, is the great army of trained teachers in this country out of employment. We estimate that the number is somewhere near the two hundred thousand mark. But the teacher unemployment is by no means caused either by the general economic situation or by school-administration retrenchment. It is simply due to an oversupply of the teaching service.

True, some school budgets have been pared, some building projects have been deferred, some teaching forces have been reduced, the purchase of supplies and equipment has been made with greater discrimination and expansion, in instances, has been checked, and yet, the immediate effect of the business depression upon school-administrative deliberation is, after all, negligible only.

The American schools, on the whole, are maintained upon the usual momentum, plan, and scope of service. School budgets for the ensuing year are, in the main, higher than they were last year. The fact that the school population is constantly growing and must be provided for, has by no means been ignored. The planning of new buildings is going on in the usual manner guided by immediate and prospective housing needs. Expansion projects are progressing along logical and orderly lines.

As already stated the teacher unemployment situation is by no means an indication that the teaching forces have been reduced. Nor is the business depression the cause of the great teacher surplus. The army of teachers that went into the school service with the autumn opening of the schools is greater than it has ever been in the history of American education.

In saying all this it is well to admit that a business depression is not without its wholesome lessons, or its note of caution. The commercial and industrial world heeds the caution and profits by the lesson. Like-

wise a school-administrative body becomes more alert and discriminating in the performance of its duties, and in the expenditure of the funds placed at its disposal.

The schools must go on. They must be maintained upon the same basis of efficiency in the future that has characterized them in the past. Hence they will not cost less money. The school administrator unquestionably will not scrutinize the dollar as much as he scrutinizes the service which that dollar has paid for. In brief, he will aim to spend the dollar more wisely and get a better return upon the same. The tendency will be in the direction of the elimination of waste, and the establishment of higher standards of school service.

School Budgets and Local Tax Ability

THE science of budgetmaking has made some remarkable strides in recent years. Its development has brought into stronger relief the line of demarcation between wise and unwise expenditures. It has made for a finer discrimination between the things that are imperatively necessary and those that are merely desirable. Finally, it has directed attention to the relation between budget items and the ability to meet them.

In brief, the science of budgetmaking has placed a higher appreciation upon the dollar and has defined with greater clarity the maximum return which the dollar must render. It affords a plan of operation whereby the needs of the future may be measured by the experience of the past. It reveals the leaks and wastes and tends toward an orderly approach to economy and stability.

In the school field the budget idea has done even more. It has on the one hand familiarized the school official with the manifold needs of the school plant, and on the other enabled him to weigh the financial aspects of maintenance and operation. The educational needs must in some manner be squared with the financial ability of the community.

There can be no question that the trend of the times, the economic variations which afflict the country, are reflected in the tax ability of the several governmental units. But while business depressions are a matter of come and go, government must continue, the schools must go on. Standards of efficiency must be maintained.

While school budgets must observe needs on the one hand and the available funds on the other, the latter phase of budgetmaking brings under immediate consideration the tax ability of the community. Or, going one step farther, it brings under scrutiny the prevailing system of taxation. Is it equitable? Is it efficient? Does it produce an adequate revenue?

Much is being said at this time about paring budgets, making retrenchments, and the like, but very little about the basic problem—taxation. Walter J. Millard, a writer in *Public Management* recently said, "The national government alone, and a few states, have systems which tend to take in taxes the unused spending power. This is at the root of the problem. Let the government collect these funds through its income-tax system and then distribute them fairly and justly over the country by constructing public betterments. . . . The national government, since it has an income-tax system, is the only unit, with the exception of a few states, that can make the total expenditure in a given period equal the income of that period."

While we do not agree to the suggestion that it will require the federal machinery to exact and distribute a state or local tax, we agree heartily with the suggestion that an income-tax system must come to the rescue if adequate school budgets are to be secured in all units of government. The fact that a "few states" have been able to devise efficient tax systems affords ample assurance that all other states may do so. Why not? In fact, the income tax as an instrument for raising state and local revenue, has met with pronounced success in states where the administrative machinery is properly constructed.

The trend of the times prompts the school administrator to approach the subject of budgetmaking with greater caution and conservatism, but the cry of retrenchment will not stampede him into steps of false economy. The tax ability of every state is in reality such as to enable the administrator to keep the school upon a high level of service. Where the smaller unit is finally weak the tax ability of the larger must come to the rescue. And where the larger unit yields an inadequate revenue it is because its system of taxation is inequitable, inefficient, and incom-

plete. The country as a whole, and every individual state therein, is amply able to maintain its system of public education upon a basis of maximum momentum and efficiency.

The Public Press and School Administration

THE experienced school administrator recognizes the fact that popular education finds its strongest ally in the public press. In publishing from time to time the activities of a school system, the press tends to establish the right relationships between the administrative body and the public. Thus, the cause of education is fostered and protected.

The real test of the value of the press, however, is more particularly demonstrated when a controversial situation has arisen. It is then that a newspaper editor may with a few well-directed strokes, put clarity and common sense to the fore. The newspaper reporter who visits the school offices may indulge in back-fence gossip and the sensational phases of a school row, but it remains for the editorial writer to rise to the situation, distinguish between the trivial and the vital, and point the way to an equitable and logical adjustment.

In representing the public, and serving as its mouthpiece, the press has the right of access to all the news that relates to the school system. Upon its sense of proportion, of news value, and fairness, much depends. The man in the editorial sanctum who voices opinions and conclusions is likely to base his judgment upon what the reporter has recorded.

A controversy invariably causes a division of the public sentiment. A superintendent, a principal, or a teacher, who has come into disfavor with a board of education may count upon some loyal friends and supporters among the citizens. Likewise, the principal who locks horns with a superintendent, or a teacher who is at sword's points with a principal, will find sympathizers. Parents may object to the transfer of pupils from one school to another, citizens may object to this or that new school site, pending building projects may be hurled into public controversy. All of these things tend to stir the public mind and lead to partisanship and discussion.

It is here where the newspaper editor may render a timely service by going to the bottom of a controversy and standing courageously for a high-minded, just, and sensible solution. That same public sentiment which runs to extremes also lends itself to sanity and reason. No one is in a more strategic position to calm the troubled waters, and restore confidence and harmony, than the editor who argues with circumspection, sincerity, and judgment.

Problem of Acoustics in High-School Auditoriums

IT is not so many years ago when it was believed that acoustical defects in public auditoriums could not be effectually remedied. There were many conspicuous instances throughout the country where a splendid public hall was rendered almost useless because the voice on the stage could not be heard beyond a range of 30 feet, or that the sounds echoed and reechoed in a manner to make speech unintelligible.

Scientific study of the subject has resulted in the establishment of definite rules as to the interior form of construction as well as the materials employed in walls and ceilings. The Bureau of Standards, Washington, D. C., has prepared a bulletin which gives complete information on the subject. In a recent announcement on the subject the bureau said:

"The public problem is that of good acoustics in an auditorium. In the first place, curved walls and domes should be avoided, as they give rise to sound foci and dead spots. Rectangular outlines are best for good hearing. In the second place, excessive reverberation is to be avoided. This is the most common defect of auditoriums, and arises from deficient sound absorption in the interior finish. The sound of a syllable or a note of music is prolonged so as to interfere with the following syllable or note. Acoustic correctives are on the market in the form of special plasters, for use in new buildings, and various fibrous materials for use in old buildings, when it is not desired to replaster."

An acoustical defect is only discovered when an auditorium is completed and ready for use. It is then that the remedy is sought and that the problem with the attending embarrassments is revealed. And it is

then, too, that the discovery is made that the remedy may prove a costly one.

The modern school architect usually knows something about general principles governing the conveyance of sound. More often he will consult an expert on the subject and will plan his structure as to form and material so as to avoid acoustical defects and subsequent cost. There are no longer any good reasons why an auditorium should not at the outset be constructed so as to be perfect so far as its acoustical qualities are concerned.

A Million-Dollar Educational Research Fund

A NOTEWORTHY departure is signalized in the proposal of the Department of Superintendence to establish a million-dollar educational research fund. The project commends itself to every educator who has an appreciation of the gigantic task of educating the youth of the land. The great American republic is deeply concerned in the maintenance of a system of popular education which shall bring to its service the most approved educational methods and achieve the highest standards in efficiency.

The research idea is accepted. It is an indispensable means for a scientific approach to the problems of popular education. The value of the research labors engaged in by the National Education Association was first expressed in a resolution adopted at the Washington meeting of the Department in 1926. In commenting on the research bulletins that had been published, the resolution said: "They are proving to be of great value in the stimulation and guidance of professional interest and improvement among teachers and school officials, and they are demonstrating clearly the possibility and effectiveness of coöperative effort throughout the nation in the improvement of public education." In the resolutions adopted subsequently at the Dallas, Boston, Cleveland, and Atlantic City meetings, the belief in the research idea was reiterated and formulated into a definite project.

The first question that arises here is: Can the educators of the country afford to contribute a million dollars for a research fund? The answer, in our judgment, is decidedly in the affirmative. They unquestionably possess the financial ability to underwrite the project. The matter rests more largely upon their loyalty, sincerity, and self-sacrifice in fostering a professional idea. And, on this score, we entertain no doubts.

In going into the mathematics of the subject, the possibilities become clear. If 1,000 educators contribute \$1,000 each, the fund of \$1,000,000 is achieved; if 2,000 contribute \$500 each, the same result will be achieved; if 4,000 contribute \$250, success will be assured.

But, let us approach the subject from another angle. There are 10,000 school executives. The ability to contribute may range from \$1,000 down to \$25. Let us for the sake of an example classify the contributors in the following order:

100 at \$1,000 each.....	\$ 100,000
400 at 500 each.....	200,000
5,000 at 100 each.....	500,000
3,000 at 50 each.....	150,000
2,000 at 25 each.....	50,000
	<hr/>
	\$1,000,000

Here, it might be added that the fund ought to be somewhat oversubscribed in order to allow for lapses on payments.

The next question is: Shall commercial interests be invited to subscribe the fund? The answer here ought to be in the negative. Professional pride ought to prompt the educational forces to hold to the thought that the offering should express in a complete sense the loyalty of the American educator in a great project. It is the schoolmaster's tribute to the cause of popular education and as such should not be marred by outside aid or help.

The educators, as a class, are better compensated today than ever before. Many of them, aside from their fixed salaries enjoy handsome incomes, due to the confidence reposed in them by the school public. They have espoused professional patriotism so eloquently upon the platform and in their writings as to enthuse and thrill their classroom coworkers. Some of them will unquestionably welcome a test of their professional loyalty as exemplified in a financial sacrifice in keeping with their ability to respond.

Will School-Bond Interest Rates Decline Further?¹

Harold F. Clark, Ph. D., New York City

The interest rates of bonds issued for school purposes took an unexpected turn upward during the month of August. The median net interest rate on all school bonds sold during the month was 4.53 per cent. This is higher than the corresponding figures for June and July preceding, and only slightly less than the net interest rate for May. School-bond interest rates are approximately 20 per cent lower than in August, 1930.

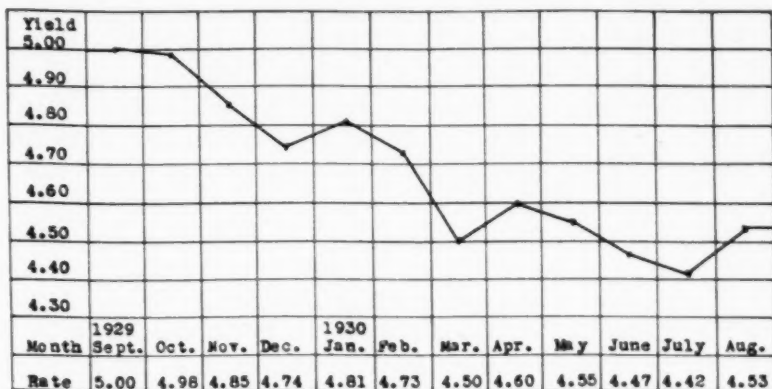


TABLE I. AVERAGE YIELD OF ALL SCHOOL BONDS SOLD DURING THE MONTH

Although the interest rates of school bonds did move upward in August, it would seem that this was but a temporary setback in the trend toward lower and lower interest rates. For approximately twelve months, the trend in school-bond interest rates has been persistently downward, excepting for minor interruptions of a temporary nature. Available data concerning the financial market indicate that interest rates on school bonds will continue to decline, notwithstanding temporary fluctuations such as

TABLE III. Amount and Yield of Bond Issues

1. School bonds sold during the month ¹ of July	\$ 11,032,000
2. All municipal securities sold during the year (to date)	846,000,000
3. All school bonds outstanding (estimated)	3,270,000,000
4. Average yield of all school bonds outstanding (estimated)	4.65%
5. Yield of school bonds of ten large cities	4.30%
6. Yield of United States long term bonds	3.27%

¹The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

happened this last August. The coming six months, and possibly twelve months, will be a propitious period for issuing new school bonds. If you are planning on issuing new school bonds in the near future, attempt to place the bonds on the market not later than next spring. With the return of above-normal business conditions, the interest rate on school bonds may be expected to increase.

TABLE IV. Bond Sales and Rates¹

		All Public			
Year	School	Municipal	Private	Year	Municipal
1929	230*	1,432*	10,194*	1929	4.67*
1928	218	1,414	8,050	1928	4.45
1927	266	1,509	7,776	1927	4.49
1926	260	1,365	6,344	1926	4.61
1925	323	1,399	6,223	1925	4.58
1924	288	1,398	5,593	1924	4.26
1923	206	1,063	4,303	1923	4.76
1922	237	1,101	4,313	1922	4.81
1921	215	1,208	3,576	1921	5.18
1920	130	683	3,634	1920	5.12
1919	103	691	3,588	1919	5.04
1918	41	296	14,368	1918	4.90
1917	60	451	9,984	1917	4.58
1916	70	457	5,032	1916	4.18
1915	81	498	5,275	1915	4.58
1914	42	320	2,400	1914	4.38

¹By special permission based upon sales reported by the Commercial and Financial Chronicle.

*Not final.

¹Copyright by Harold F. Clark.

Compare the net interest rates which it is necessary to pay on school-bond issues in your community with the summary data given in Table II for the entire United States. The highest net interest rate in August was 6.00 per cent or 60 per cent greater than the lowest net interest rate. As is so often the case, a Massachusetts community has succeeded in obtaining the most favorable interest rate. One half of the rates recorded during the month of August were

TABLE VII. Revised Index Number of Wholesale Prices (United States Bureau of Labor Statistics, 1926 = 100)

Month	All commodities	Building Materials	Year	All commodities	Building Materials
1930 Sept.	82.8*	83.4*	1928	97.7	93.7
Aug.	82.6*	84.8*	1927	95.4	93.3
July	84.0	88.9	1926	100.0	100.0
June	86.8	90.0	1925	103.5	101.7
May	89.1	92.9	1924	98.1	102.3
April	90.7	94.7	1923	100.6	108.7
March	90.8	95.4			
Feb.	92.1	95.7			
Jan.	93.4	96.2			
1929 Dec.	94.2	96.2			
Nov.	94.4	96.0			
Oct.	96.3	97.8			

*Not final.

year from September 15, were offered for a total of approximately 325 million, while subscriptions were received for almost four times that amount. These certificates bear the lowest rates of interest ever offered on this type of security. The government has been able to sell noninterest-bearing treasury bills, for terms of two or three months, at such small discounts as 1 1/2 per cent. This is hard to imagine, knowing that many of our most reliable savings banks are paying as high as 4 1/2 per cent interest.

TABLE II. Net Interest Rates for School Bonds Issued During August, 1930

	Per Cent
Highest	6.00
Third Quartile	5.00
Median	4.53
First Quartile	4.24
Lowest	3.74

Possibly the strongest confirming evidence that the interest rates on high-grade bond issues will decline for at least another six months, is the decision of the United States Treasury to call over a billion dollars of the 3 1/2 per cent treasury notes on March 15, 1931. The Treasury naturally is expected to replace the redeemed notes by a new issue bearing a lower rate of interest. This announcement on the part of the Treasury is accepted by financial analysis as an almost certain indication that interest rates will become decidedly lower during the next six months.

THE EFFECT OF ULTRA-VIOLET RAYS ON SCHOOL CHILDREN

Quite recently a plan was advocated which provided for the holding of school classes during the summer months, leaving the winter months free for outdoor play. The plan did not receive general consideration due to the growing knowledge of the use of ultra-violet transmitting glass and the use of this glass in many schools throughout the country.

A number of tests have been made to prove the permanent efficiency of ultra-violet glass. At the Greets Green School, West Bromwich, England, it was proved that children under ultra-violet glass gained on an average of .4 pound more in six months than a control group under ordinary window glass. By a transfer of the groups at the end of a six months' period, it was noted that the children who had previously fallen behind in weight under the ordinary glass had caught up, until there was an average weight in the two groups that was practically equal. Absences during the period were reduced 65 per cent.

In another school at Birmingham, a test conducted by Dr. J. Bell Ferguson, showed that children under the special glass for a period of nine months gained more than twice as much as those under ordinary window glass. Absences in this group decreased over 40 per cent, while the scholastic rating was raised.

The Episcopal Academy at Overbrook, Pa., and the Fort Miami School at Maumee, Ohio, reported similar good effects under ultra-violet glass, with a marked decrease in absences and a definite increase in scholastic grades. Colds and grippe were noticeably decreased with the use of the ultra-violet glass.

TABLE V. Average Yield of Long Term Federal Government Bonds¹

Month	Rate	Year	Rate %
1930 Sept.	3.32*	1928	3.437
Aug.	3.36*	1927	3.464
July	3.37	1926	3.544
June	3.37	1925	3.797
May	3.41	1924	4.010
April	3.46	1923	4.298
March	3.40	1922	4.301
Feb.	3.50		
Jan.	3.51		
1929 Dec.	3.46		
Nov.	3.45		
Oct.	3.67		

¹Taken from Federal Reserve Bulletin.

*Not final.

between 4.24 per cent and 5.00 per cent. Since high-grade municipals are now being listed at prices yielding from 3.80 per cent to 4.25 per cent, it would seem that school bonds have not yet benefited to the extent that may be expected as a result of the present scarcity in the bond market. The financial newspapers and periodicals frequently mention the decided scarcity of high-grade bonds with little prospects of a decided increase in new offerings. This scarcity in the better-grade bond issues should result in a rather strong decrease in the net interest rates for school bonds in the near future.

TABLE VI. Security Prices and Yields¹

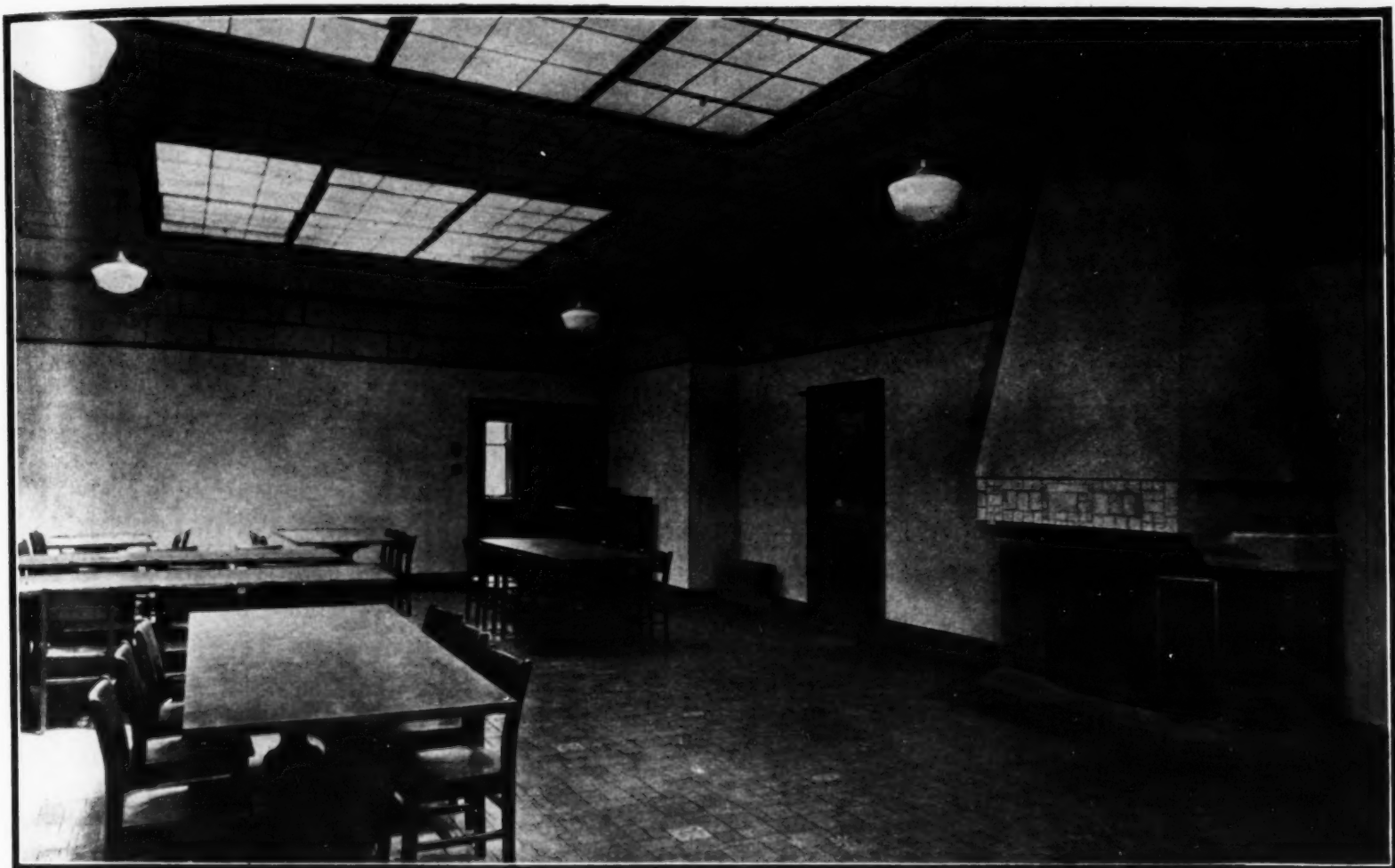
Date	Average Price of 406 Stock (1926 Average = 100)	Average Price of 60 Bonds	Average Yield on 60 High-Grade Bonds
1930 Sept.	147.8*	100.1*	4.39*
Aug.	148.0*	99.7*	4.42*
July	149.3	98.7	4.49
June	152.8	98.2	4.53
May	170.5	97.9	4.54
April	181.0	97.9	4.54
March	172.4	97.8	4.55
Feb.	166.5	96.4	4.65
Jan.	156.3	96.5	4.64
1929 Dec.	153.8	96.5	4.64
Nov.	151.1	95.7	4.70
Oct.	201.7	95.1	4.73

¹As reported by Standard Statistics Company, Inc. Used by special permission.

*Not final.

That there is at present a surplus of money on the market is clearly shown by the recent oversubscription of the new Treasury certificates of indebtedness bearing interest at 2 3/4 per cent. These certificates, which run for one

A MESSAGE TO SCHOOL OFFICIALS FROM
THE UNITED STATES GYPSUM COMPANY



Study Hall, Skokie School, Winnetka, Ill. Hamilton, Fellows and Nedved, Architects.

Stop Interfering Noise in Your Schoolrooms

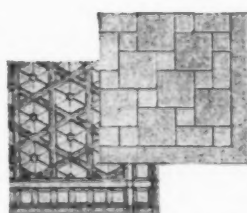
NOISE ABATEMENT—leading educators now consider it of great importance to the welfare of their schools. And science now comes to their aid to help them reduce the distracting noises that are created in corridors, auditoriums, manual training shops, music studios, gymnasiums, etc.

All these disturbances are now greatly reduced—and the quietness of the school brought to a more comfortable level for the students and teachers by installing Acoustone, the **USG** Acoustical Tile.

Acoustone is a scientific sound-absorbing mineral material. When applied to the present walls and ceilings it absorbs and

dissipates the sound waves which strike it—preventing disturbing reverberations. It resembles Travertine Stone and it comes in tiles of various shapes and colors which lend to a great variety of beautiful decorative designs. It is sanitary, fire-proof, and is cleaned simply by vacuum cleaning. No structural alterations or no interruption to school activities are required to install Acoustone.

When it is desirable to prevent the transmission of sound from one room to another, the **USG** System of Sound Insulation is often employed. Many schools have already installed this sci-



The many designs, patterns and color combinations which may be obtained with Acoustone make its use highly desirable in connection with any type of masonry, as well as other interiors.

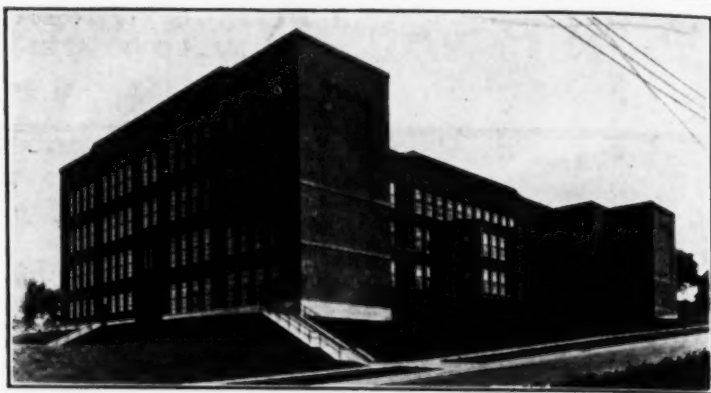
entific construction to make their schools quiet.

If you are interested in abating noise in your school, we invite you to allow one of our acoustical experts to make a study of the acoustical conditions therein. He will advise you, without obligation, how the noise in

your institution can be reduced. If his recommendations are accepted, we will supply the materials, supervise the installation and assume full responsibility for satisfactory results. Address the United States Gypsum Company, Dept. 75N, 300 West Adams Street, Chicago, Illinois.

A C O U S T O N E

No better glass
for Schools than



Eastern Ave. School, Grand Rapids, Mich. Henry H. Turner, Architect, Grand Rapids. Glazed with Libbey-Owens-Ford "A" Quality Glass

LIBBEY·OWENS·FORD "A" QUALITY

THREE significant features of Libbey-Owens-Ford flat-drawn clear sheet glass have led to its nation wide use in fine school buildings. . . . It is exceptionally clear, allowing a maximum of daylight to enter. Special care in annealing makes it less brittle—less susceptible to break-



age. And its rich, sparkling lustre adds real beauty to the building glazed with it. . . . Ask your school board architect about it in connection with future building plans. Each light of "A" quality bears the familiar L·O·F label—for your identification and protection.

LIBBEY·OWENS·FORD GLASS COMPANY
TOLEDO, OHIO

WASHINGTON CORRESPONDENCE

A. C. Monahan, Formerly U. S. Bureau of Education

Dr. W. Carson Ryan, Jr., professor of education at Swarthmore College, has been appointed director of education in the United States Indian Service, to begin work immediately.

Dr. Ryan is well known among schoolmen of the country. He was in the United States Bureau of Education as editor and specialist in vocational education from 1912 to 1920. In 1920 he resigned from the Bureau to become the educational editor of the *New York Evening Post*. In 1921 he went to Swarthmore as professor of education and head of the department of education, and actively participated in a number of outside educational enterprises.

In 1916 he served as specialist in vocational education and statistics on a survey of education in Saskatchewan, Canada. He was associated with Dr. Thomas Jesse Jones, educational director of the Phelps-Stokes Fund, in his international studies of racial education. In 1926 he was staff member for secondary education on the Porto Rican school survey, and later on the commission that made a survey of education in the Virgin Islands. He has made surveys of local educational systems in this country, and is a director of one of the newer types of elementary schools at Rose Valley, Pa.

Dr. Ryan was secretary for the National Vocational Guidance Association from 1915 to 1918, and president of that organization in 1926. He served on the editorial council of the National Education Association, and from 1921 to 1927 he was associate editor of *School and Society*. In 1927 he was the American delegate from the Progressive Education Association to the World Conference on Education at Locarno, Switzerland. He is chairman of the International Examination Enquiry set up as a result of this conference, and has recently been active on the President's Commission on Child Welfare and on the National Advisory Committee on Education.

Indian education will not be a new subject to Dr. Ryan. In 1926 he visited all of the larger, and many of the small schools in the Indian service, studying public and mission schools for teaching Indians.

Dr. Ryan was graduated from Harvard in 1907, and in 1918 received the degree of Ph.D. from George Washington University. Before entering the Bureau of Education, he had taught in both high school and university.

Protecting Stone Buildings from Decay

School authorities erecting school buildings of stone should keep in mind that certain stones, commonly used in the sidewalls of buildings, are subject to decay, or disintegration, from various causes. This disintegration according to the American Chemical Society may be due to salt sea breezes, to the presence of bacteria in the pores of the stone, to frost action, to the freezing of water particles in the pores or to the formation of crystals of lime salts through the action of rain water and acid.

A process of preventative treatment has been evolved after several years of experimentation. A composition whose main ingredients are candle wax and beeswax is applied to the stone. The wall is first heated with a mild, even heat, given by charcoal and molten paraffin applied with a brush. It sinks into the warm wall for a quarter or a half of an inch, and solidifies there, resulting in a waterproof coating that lasts for decades.

Federal Aid to Education

School administrators interested in the question of the United States Government's participation in the financial burden of the various states in establishing and maintaining education, will be interested in a recent digest of all acts of Congress dealing with the matter, made by the United States Office of Education.

Much of the Federal aid was in "land grants." States were given federal lands located within or without their own boundaries, which they could sell to gain a revenue for education. The first of these grants was the proviso in the "Ordinance of 1787" for the government of the "territory of the United States, northwest of the Ohio River." This

set aside "Section 16" in each congressional township for the benefit of the public schools. This action was extended later to cover the "Louisiana Purchase," all acquisitions to the territory of continental United States. Later, as new states were admitted, the Oregon Territory Act provided that two sections in each township should be set aside for the benefit of the schools—and in four states in the dry sections, four sections each were set aside. Altogether, thirty states received either one, two, or four sections in each congressional township for the benefit of public education.

Other donations of land were provided in special acts of Congress for state universities, "seminaries of learning," normal schools, industrial, and reform schools, schools for the blind, etc. In 1862 was passed the Act establishing the so-called "land grant colleges," colleges of agriculture, and the mechanical arts.

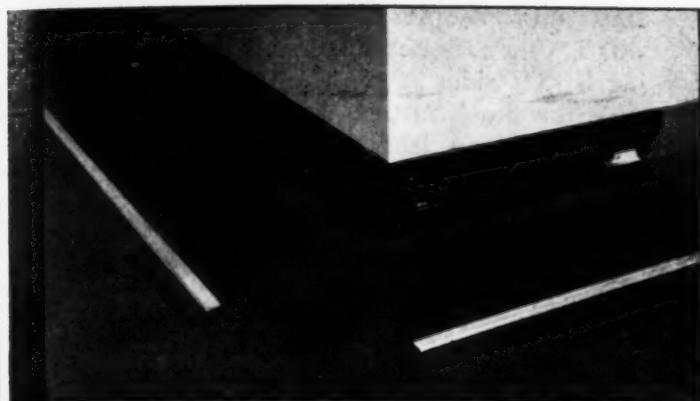
Money appropriated to the states for public education includes that provided in the Morrill and Nelson acts for the State Colleges of Agriculture and Mechanical Arts; the Hatch, Purnell, and Adams acts for the state agricultural Experiment stations; the Smith-Lever, Capper-Ketcham acts for agricultural extension education; the Smith-Hughes Act for vocational education, and the Smith-Bankhead Act for the rehabilitation of men and women disabled in industrial work.

The amount of these land grants and appropriations is as follows:

	Acres
Common school grant, (16th section, etc.).....	58,519,946
Universities, seminaries of learning, etc.	3,987,954
Colleges of agriculture and mechanical arts.....	11,696,082
Industrial and reform schools, etc., and Military, scientific, mining, etc.	3,173,789
Total land	117,377,771
Morrill, Nelson acts 1890-1930 inc.....	\$ 74,202,000
Hatch, Adams, Purnell acts 1887-1930.....	12,077,915
Smith-Lever, Capper acts 1915-1930.....	73,145,872
Smith-Hughes Act 1918-1930.....	67,800,000
Smith-Bankhead Act 1921-1930.....	10,500,000
Total money.....	\$ 277,725,787

The above amount of land given the states for educational work is an area larger than all New
(Concluded on Page 68)

THINGS EVERY LINOLEUM CONTRACTOR DOESN'T KNOW



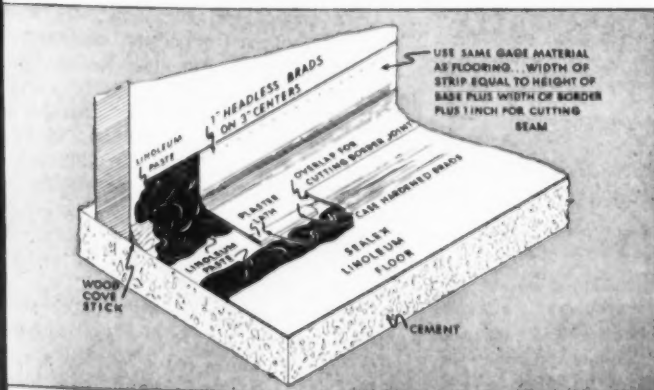
Materials assembled for laying one-piece cove-base and border in an "outside" corner. The cove-stick has been installed and Sealex Linoleum Paste has been applied on the wall.



Here we see the mechanic fixing the cove-base and border in place by means of headless brads, placed on 3" centers, 1/4" below top of base.



Picture shows mechanic completing the job, spreading linoleum paste under edge of the border and the patterned linoleum used for the floor.



The diagram above shows the materials required for a one-piece cove-base and border, and the mechanical details of assembly. The cove-stick is a piece of soft wood, triangular in shape, with 1 1/2" legs rabbeted to a concave face. This method of construction gives a neat, sanitary effect at comparatively low cost. Available through Authorized Contractors of Bonded Floors.

CONTRACTOR DOESN'T KNOW

THESE pictures show three steps in the installation of a *one-piece border and sanitary cove-base* in Sealex Linoleum. Constructing this as one unit is one of those fine points of craftsmanship that mark the difference between a good floor and a fine floor.

The one-piece base, border and cove, possesses certain definite points of superiority. It lends itself to a much greater variety of decorative effects. It makes possible a border of any width and in any color—as opposed to the strictly limited assortment of effects in the factory-made cove.

Furthermore, this Bonded Floors cove-and-border is structurally sounder than the old-style type. The number of cove cross-joints is reduced. It is less expensive to construct—and can readily be installed on the job by a skilled mechanic.

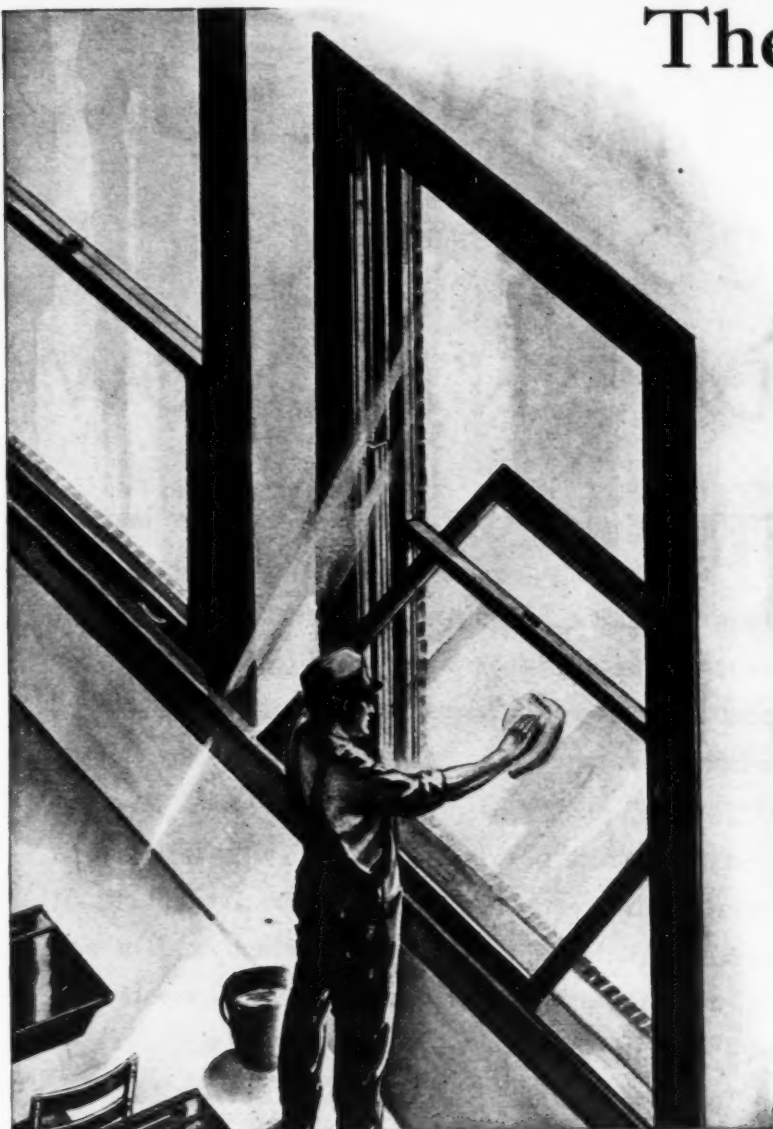
This one-piece border and cove-base was developed by the engineers of the Bonded Floors organization. We have described it in some detail because we consider it a typical example of the progressive flooring service offered by Authorized Contractors of Bonded Floors. May we send you the names of Authorized Contractors near you?

CONGOLEUM-NAIRN INC. . . General Office: KEARNY, NEW JERSEY

BONDED FLOORS



Bonded Floors are floors of Sealex Linoleum and Sealex Treadlite Tile, backed by a *Guaranty Bond* issued by the U.S. Fidelity and Guaranty Company. Authorized Contractors of Bonded Floors are located in principal cities.



The Short-Cut to Sunlight is from the Inside

How much simpler than climbing out on narrow sills is the Williams Reversible principle of cleaning BOTH sides of the window from the INSIDE. And how much faster! And more efficient! Cleaning costs drop from 33 1/3% to 50% when this modern method is employed.

With costs so low, windows can be cleaned more frequently. Soot and grime do not get a chance to blur out vital sunlight. Schoolrooms are brighter . . . more livable . . . kinder to pupils' eyes.

Ventilation improves, too. For Williams Equipped Windows are easily tilted to give a wide range of draftless circulation.

In every respect you'll find Williams Reversible Equipment ideally suited for schoolroom use . . . as have hundreds of schools in all parts of the country. Catalog gladly sent upon request.

THE WILLIAMS PIVOT SASH COMPANY

East 37th St. at Perkins Ave., Cleveland, Ohio

*For twenty-six years manufacturers and installers of
Reversible Window Equipment*

**WILLIAMS REVERSIBLE
WINDOW EQUIPMENT**
Clean Your Windows from the Inside

(Concluded from Page 66)

England and the Middle Atlantic States north of the Potomac River put together. The moneys paid to the states is about one tenth of the total expended during the past school year for all public education.

Changes in U. S. Office of Education

Several additions to the staff of the U. S. Office of Education are of interest to the school authorities of the country.

Miss Elsie H. Martens has been appointed senior specialist in education of exceptional children, in the division of special school problems, of which Mrs. Katherine M. Cook is the chief. Dr. Martens is a graduate of the University of California, with a master's degree from the same institution, and a doctorate from Leland Stanford University. She has served as assistant director of the bureau of research and guidance of the Oakland and Berkeley, Calif., schools; later an assistant director of practice teaching at the University of California, and later at the San Jose Teacher's College, where she had special adjustment work with exceptional children. During the past two years she has done special work with exceptional children, in educational and psychological experimentation at Leland Stanford.

Dr. Ambrose Caliver has been appointed specialist in Negro education in the same division of the Bureau. He is a native of Virginia, who received his bachelor's degree from Knoxville College, and his M.A. from the University of Wisconsin. He studied at Harvard and the Tuskegee Institute, and was formerly dean of Fisk University, in Nashville.

Miss Sebra W. Vought, librarian of Pennsylvania State College, has been appointed head of the library division, with a salary of \$4,600, to fill a vacancy existing for over a year, since the resignation of Dr. Walcott. Miss Vought has had valuable experience in library work, serving as librarian of the University of Tennessee for nine years; organizer of the Ohio Library Commission for two years; and a member of the staff of the New York State Library for six years, in which position much of her work was with the educational library and extension work. She had been at Penn State since 1924.

Mr. Emery M. Foster has been made chief of the statistical division of the Office of Education. He has been a member of the division for seven years, under the title of principal statistical assistant, and during these years he did much work for the various state departments of education, assisting them in programs for uniform educational statistics.

Defective Teeth and Retardation

Mr. Simon Covert, specialist in the U. S. Office of Education, assisted by Mr. David T. Blose, has completed a study of 7,632 elementary-school pupils in 45 modern consolidated schools, showing the relation of retardation to their physical defects.

Defective teeth were found to be the most common physical defect, 66 per cent of the boys and 61 per cent of the girls having decayed teeth. The average number of decayed teeth per pupil was 3 for boys and 2 for girls. One half of the boys and one third of the girls with decayed teeth were one or more years over the age level of their grade. Bad eyesight, defective hearing, speech defects, and bad posture were found to be causes of retardation. In other words, retardation among pupils with physical defects is greater than among those without them.

PROGRESS OF VISUAL INSTRUCTION IN THE UNITED STATES

F. D. McClusky, Director of Scarborough School, Scarborough, New York

Teaching with pictures has come to be an accepted procedure in the modern school. This is shown by a recent survey conducted under the auspices of the National Academy of Visual Instruction. The study has disclosed the fact that over three million dollars have been spent for visual education during the past seven years in the public schools of 14 of the largest cities in the United States.

During the school year 1922-23 the annual expenditure in these 14 cities was \$370,000. This sum has increased annually so that over \$600,000 will have been expended when the current school year 1929-30 comes to a close this month. The cities

included in the study are New York, Chicago, Philadelphia, Detroit, Pittsburgh, St. Louis, Cleveland, Kansas City, Buffalo, Atlanta, Newark, Oakland, Reading, and Berkeley.

The survey also included the work of visual instruction in a group of 20 smaller cities. The public schools in these cities have spent a half million dollars during the past 7 years and will have expended 122,000 during the current school year. It was found, too, that 23 state bureaus of visual instruction, located for the most part in the state universities, have made an investment of \$1,500,000 during the seven-year period. The state bureaus have spent from \$190,000 to \$270,000 annually.

To summarize, the survey shows that \$5,000,000 have been expended during the past 7 years on visual instruction in the public schools of 34 cities and in 23 states. This figure does not include the expenditures (1) of many city and state museums which conduct school service departments, (2) of individual schools within the large city school systems, and (3) of schools in the thousands of smaller towns and rural districts which have invested in visual instruction equipment.

Pittsburgh, Los Angeles, Detroit, and St. Louis are outstanding in the work of visual education. Their budgets this past year called for expenditures ranging from \$60,000 to \$110,000. In Pittsburgh, Los Angeles, and Kansas City the teacher-training institutions require all students to take courses and to pass examinations in visual instruction before graduation. Courses in visual education are now offered in 71 state normal schools, colleges, and universities.

No one can predict what effect sound pictures will have on the future of visual instruction. Many attempts are being made to introduce the sound picture into the educational field. The important thing is to produce good instructional pictures. When this is done the schools will want them. But in the meantime our schools will use illustrated books, photographs, lantern slides, stereographs, models, and the other cheaper forms of visualization with the increasing effectiveness and on large amounts. The facts show that the movement to visualize instruction is coming into its own.

SUPREMACY



Through Unfailing Adherence to High Standards of Quality

THE high regard which engineers of public telephone companies show for Strowger Dial telephone equipment is based on long familiarity with Strowger quality. They know that, while it is easily possible to select equipment whose first cost is low, no other type of equipment is as economical in the long run as Strowger.

These facts deserve the most careful consideration on the part of school executives or architects who are faced with the responsibility of selecting interior telephone equipment for schools. For the telephones, switches and other apparatus which are used in the construction of Strowger P-A-X are exactly the same in design and construction as those used for public service. They are built to meet the exacting needs of leading telephone companies and administrations in all parts of the world.

Strowger engineers will be glad to make a survey of any school project calling for interior telephone equipment and recommend accordingly. Bulletin 1026 gives full details. Write for your copy.

**STROWGER AUTOMATIC
DIAL SYSTEMS**

Engineered, Designed and Manufactured by

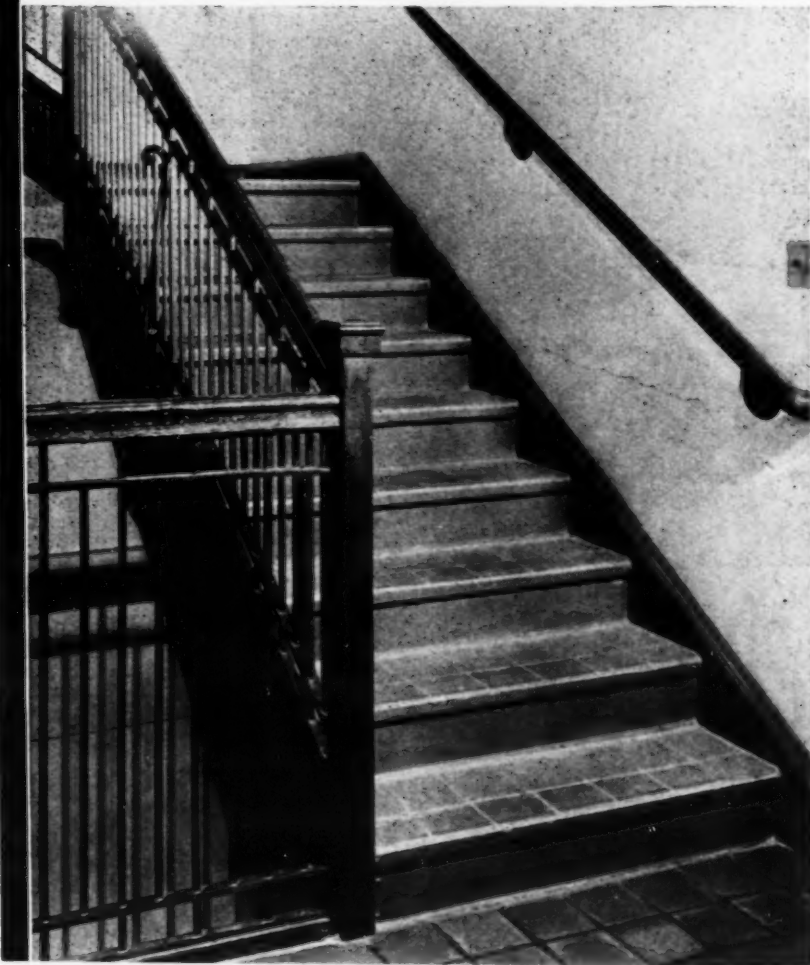
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For Permanent Safety —

Treads of Alundum Stair Tile



SCHOOL building steps must be more than just safe—they must be *permanently* safe. They must not become smooth and slippery under the constant scuff of youngsters' feet. They must not wear into dangerous hollows.

The extreme hardness and toughness of Alundum abrasive, the basic material in Alundum Tiles, assures permanence. They stand up and remain non-slip under the most severe traffic conditions. And they have no grooves or corrugations to encourage tripping.

NORTON COMPANY, WORCESTER, MASS.

T-272



AN ILLINOIS SCHOOL EQUIPS FIELD FOR NIGHT FOOTBALL

The little coal-mining town of Westville, Ill., is the pioneer community in Illinois to introduce night football. The first game was played in September, 1929, before a throng including practically the entire population of 5,000 people and hundreds from surrounding towns.

No so-called standard equipment was available. A local electrical engineer advised the mounting of 28 lamps of 1000-watt capacity each, set in reflectors and placed two to a pole about 30 feet high. That makes seven poles on each side of the field, equally spaced between the goal lines. The poles are set back about 8 yards from the side lines to facilitate play and to throw the light along the edge of the field. No lights are placed at the ends of the field because of the glare which they would cause to interfere with play. The net income from night games provided the funds for poles and installation.

When the Westville field was equipped, local skeptics felt that punts and passes would be im-

possible and that spectators and officials would not be able to see close line plays. All doubts were removed when the white ball was put into play at the first kick-off. The ball stood out against the background of night like a snowflake on a black cloth. Officials had no difficulty in following plays and players, and the players showed by their offense that they were not hindered in any way by the lights.

The equipment described can be installed for approximately \$700 by a local electrician. Standard equipment of more permanent type will cost from \$1,600 to \$3,000, but the \$700 outfit will certainly light a field splendidly.

The advantages of night football are apparent. High schools and small colleges find it difficult to draw crowds in the afternoon on account of working conditions. Farmers, miners, merchants, and factory employees are glad to attend a football game if they can do so in the evening.

CONTROLLING SCHOOL-BUS DRIVERS

Ralph H. Lonfield, superintendent of the St. Joseph county, Indiana, schools, maintains super-

vision over the transportation in his county in part through a weekly report of the school-bus driver to the principal or teacher of the school served. The vertical headings of the report form are the five school days. The horizontal are: (1) length of the route (distance from where first pupil enters bus to the school building), (2) time first pupil entered bus, (3) time of arrival at school, (4) number of pupils, (5) time last pupil leaves bus in evening, (6) conduct of pupils, (7) condition of roads, (8) was the bus warm, (9) was the bus clean, (10) did you stop for R.R. crossing, (11) gallons gasoline added (if equipment is owned by township), and (12) quarts of oil added (if equipment is owned by township). A line is provided at the bottom of the page for listing the names of pupils whose conduct was unsatisfactory. The full report is filed by the receiving principal, or teacher, with the township trustee.

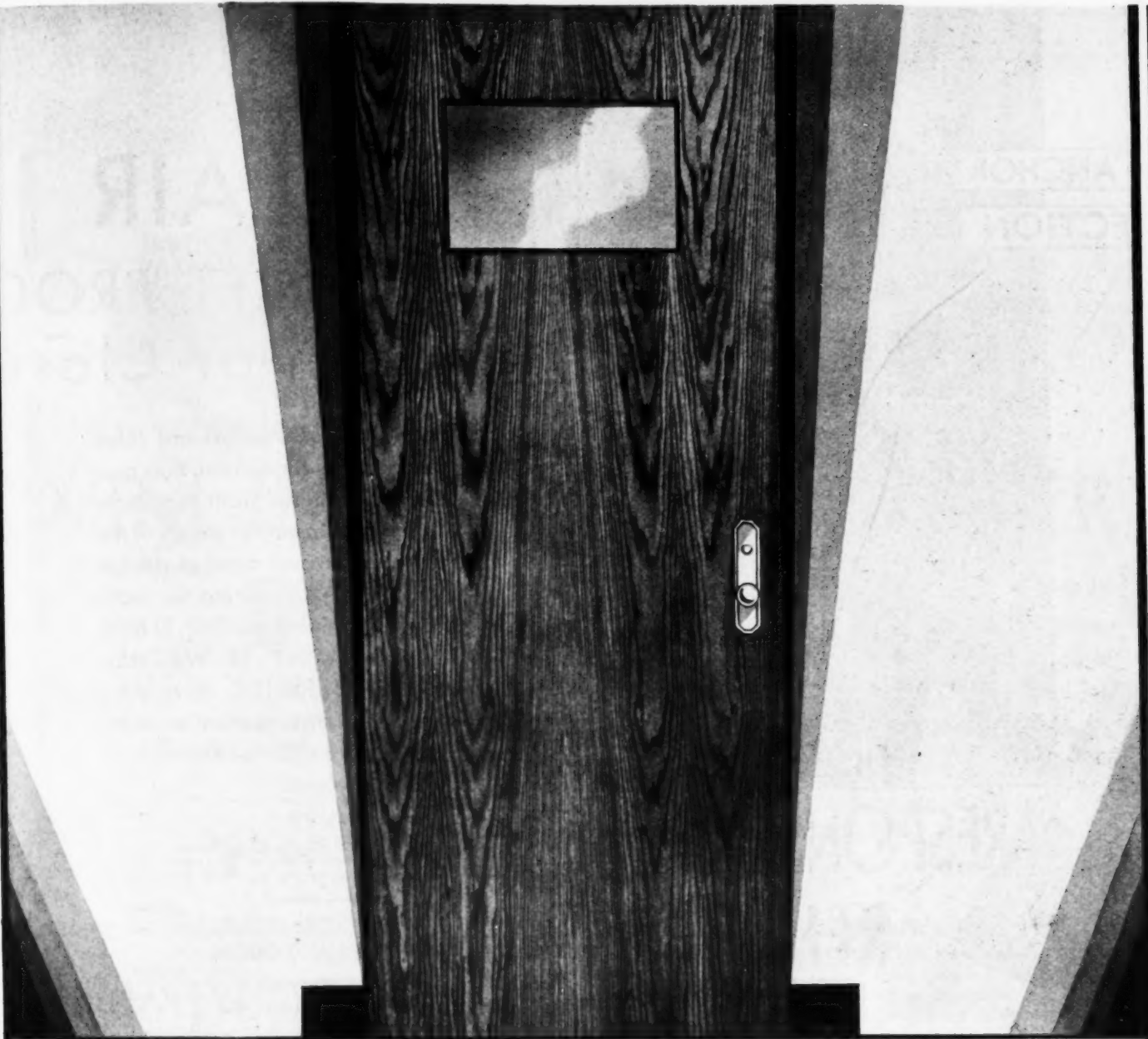
PER-CAPITA COST OF SCHOOLS IN NORTH CAROLINA

The state education department of North Carolina has issued a report, in which it shows that the state spent one half as much per pupil enrolled as did the nation as a whole during the year 1927-28. The per-capita amount expended for current operation of the schools of the state was \$35.20, while the cost for the United States as a whole was \$71.39 per pupil. The highest per-capita cost, \$118, was in New York, while the lowest, \$23.07, was in Georgia.

Two factors have been noted as affecting materially the cost per pupil in the various states. One is the density of population, which is noticeable in the northwestern states, and the question of race, which affects the teachers and the attendance of pupils. Colored children do not attend school as well as white children and Negro teachers are not as well trained as white teachers, all of which tends to decrease the per-capita cost of education in states having a large per cent of Negro population.



FOOTBALL FIELD OF THE WESTVILLE, ILLINOIS, HIGH SCHOOL
Picture taken in 1929 during a successful night game.



WHY RODDIS FLUSH DOORS ... ARE PREFERRED ...

Roddis Flush Doors are *truly* sound-retarding and fire-resisting. With that, they are exceptionally handsome: in design, woods and finish—and *permanently* so in their everlastingly enduring, completely solid 5-ply construction. That is why Roddis Flush Doors are so universally used in schools: containing every requisite school building needs specify.

Roddis construction consists of an inner core of soft-wood blocks cemented together under hydraulic pressure: $\frac{1}{16}$ " cross-band hardwood veneer glued, under pressure,

to both sides of core: $\frac{1}{16}$ " hardwood surface veneer glued, under pressure, to cross-band veneer, both sides: $\frac{3}{4}$ " closure-protecting edge-strip on *all four* edges of door. A 5-ply, completely solid door, as referred to in the paragraph opposite. Interesting Roddis catalog sent on request.

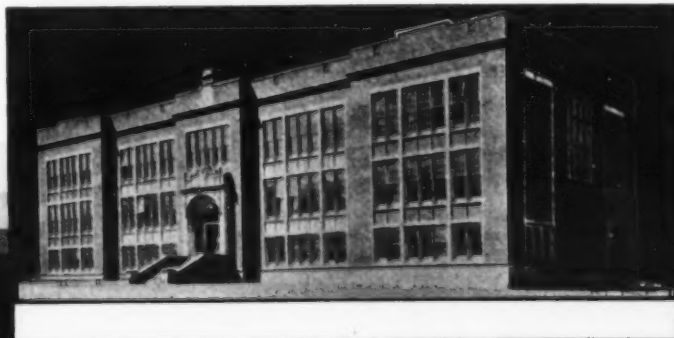
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125 Fourth Street Established 1890 MARSHFIELD, WIS.

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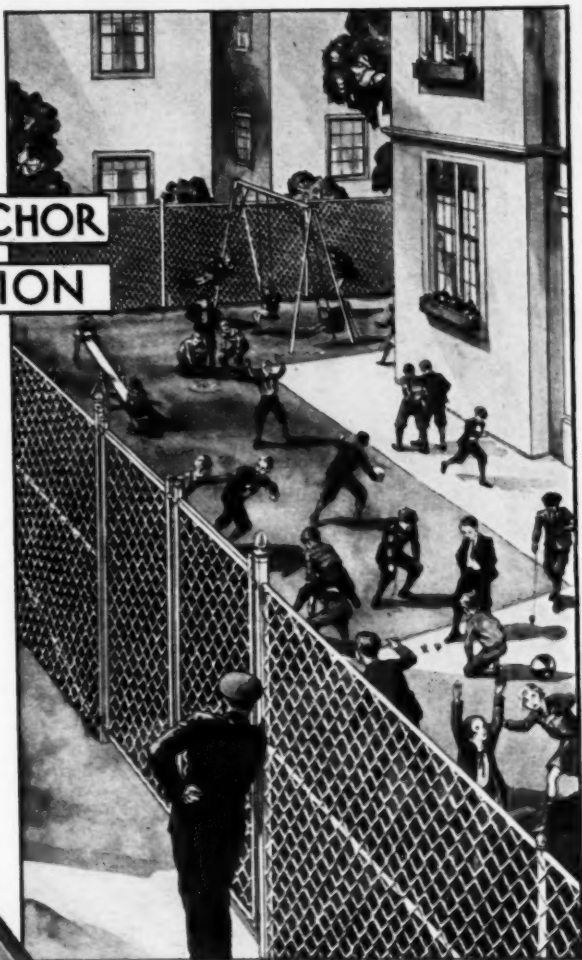
Dickinson School, Grand Rapids, Mich.
Completely Equipped With
Roddis Flush Doors



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RODDIS FLUSH DOORS

WITH ANCHOR PROTECTION



RESPONSIBILITY RELIEVED

Recess period! Play-minded youngsters rush to the playground to give vent to their pent-up excess energies. Caution is abandoned. Discipline is inadequate, to stop their racing feet from running into dangerous traffic lanes. Safety must be enforced.

With Anchor Protection children play in safety. Your responsibility is relieved. An Anchor Fence provides positive protection at the boundaries of your playground.

An Anchor Fencing Specialist is located near you. Just phone or write, and his services will be placed at your disposal. Or, ask for complete catalog of Anchor School Fences.

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Representatives in all principal cities. Consult your local classified directory.



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MADE BY THE MAKERS OF AMERICA'S
FIRST CHAIN LINK FENCE

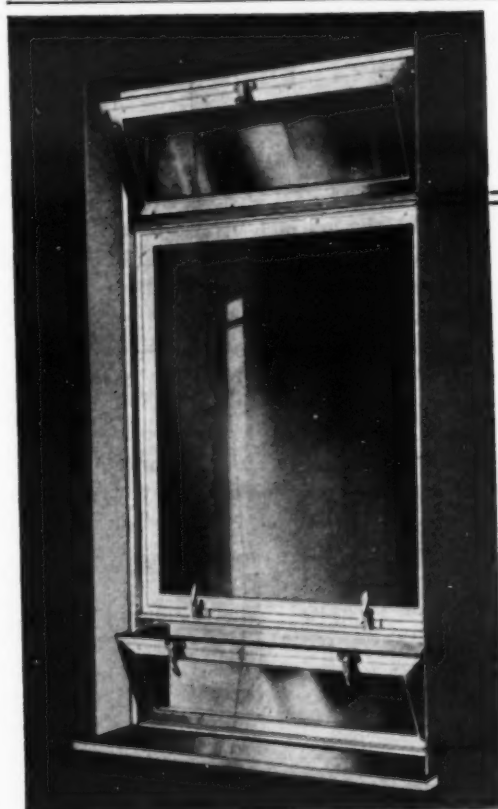
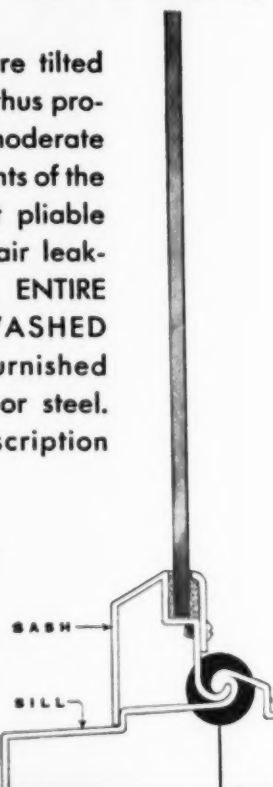
SEALAIR IS DRAFT PROOF Open or Closed

When open the sashes are tilted to deflect the air current, thus providing the interior with moderate ventilation. Closed, the points of the sash are pressed against pliable asbestos strips reducing air leakage to a minimum. THE ENTIRE WINDOW MAY BE WASHED FROM THE INSIDE. Furnished in heavy gauge bronze or steel. Send for complete description and F. S. details.

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DEWITT CLINTON
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Students in 26 New York Public Schools SWIM IN DRINKING WATER!



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The twenty-sixth W. & T. Chlorinator to be installed by the New York Board of Education during the past seven years is now in service on the DeWitt Clinton High School, a recently completed unit of the Board of Education's \$350,000,000.00 school program.

Surely a convincing argument in favor of equipping your school pool with a W. & T. Chlorinator.

BUILDING NEWS OF THE SCHOOLS

NEW YORK CITY LEADS IN SCHOOL-BUILDING CONSTRUCTION

New York City, along with thirteen other principal cities, has been spending more on the erection of its school buildings than on any other single item of public construction. This is shown in an intensive study of public construction, recently conducted by Dr. Leo Walman, under the auspices of the National Bureau of Economic Research for the Committee on Recent Economic Changes of the President's Conference on Unemployment.

During the ten years ending with December, 1928, Dr. Walman showed, \$285,195,000, or almost 28 per cent, of the \$1,019,247,000 spent for public construction went for educational buildings. The fourteen cities studied in the survey included New York, Chicago, Philadelphia, Boston, Detroit, Cleveland, St. Louis, Albany, New Haven, Newark, and St. Paul.

The study showed that the expenditure for school buildings maintained the lead in most of the fourteen cities despite the impressive sums spent in other fields of construction in the direction of municipal improvement.

In practically all of the cities, expenditures for school building construction consumed from 27 to 30 per cent of the total appropriations for public construction. In Chicago, almost half of the total was spent on schools during the decade. New Haven spent 85 per cent; Rochester spent almost 39 per cent, and St. Paul about 44 per cent.

The ten-year expenditure for educational buildings in Chicago was far ahead of that for any other item, reaching \$142,574,000 as against \$307,699,000 for all public works.

Philadelphia's expenditure for educational buildings amounted to \$72,107,000, or more than 28 per cent of the total during the same period for public construction, which was \$257,159,000.

A total of \$33,754,000 was spent in the period by Boston for educational buildings, as against \$91,349,000 for all public works, or nearly 37 per cent.

In Detroit, \$63,069,200 was expended for educational construction, which is more than 30 per cent of the \$208,124,000 spent for all public works.

The educational building item for the ten-year period in Cleveland was \$45,504,500. St. Louis expended \$23,550,000 for educational buildings, or more than 27 per cent of the amount for all public construction. Albany, N. Y., expended \$6,636,000 for educational buildings during a ten-year period, which was 28 per cent of the amount for all public construction.

A CHECKING SHEET FOR JANITORIAL WORK

The school administrative department of the city schools of Okolona, Miss., during the past year, adopted a system for checking the service of janitors. The system provides for the checking of

items which have not received proper attention and the notations are made on the teacher's daily report which goes to the principal's office.

The teacher is asked especially to check the proper care of the floor, desks, radiators, book-cases, blackboards, shelves, window sills, walls, chairs, and tables in her classroom. The monitors are asked to check the basement, the corridors, the stairways, and the teacher's room.

Under the plan, it is the duty of the teacher after the opening of school each morning, to fill out one of these blanks and place it on a hook outside the door of the schoolroom. The blanks are collected promptly by the janitors, who are required to make such changes or remedies as are necessary during the day. The reports are retained in the office for one day in order to make possible comparisons and rechecking of items which may not have received attention or were overlooked. Janitors who fail to look after the item checked are notified to see that proper care and attention is given.

The reports are not intended to replace the daily inspection of the buildings by the principal but are reminders to the janitors of items requiring attention and which may be overlooked in the daily inspection. The system has been entirely successful as a means of improving the janitorial service and the teachers have enthusiastically approved it and have cheerfully cooperated in carrying out the work.

BUILDING NEWS

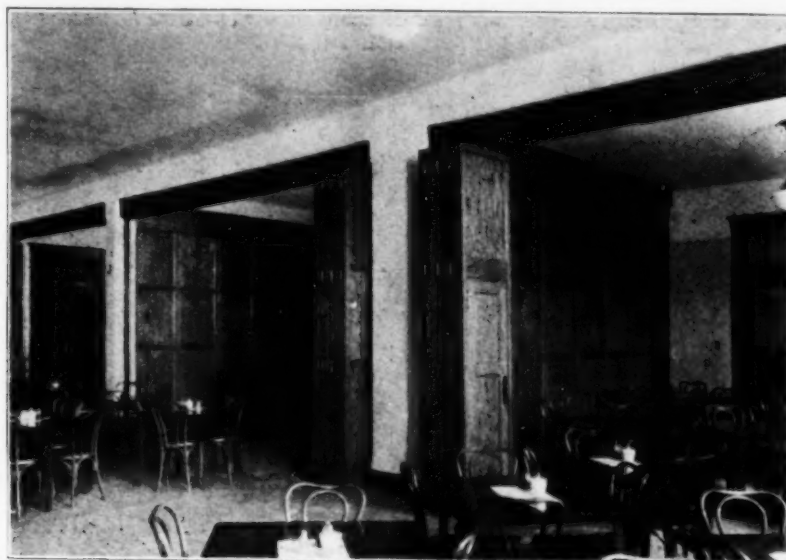
♦ A modern teachers' training building has been completed and occupied at the University of Kentucky with the opening of the new school term. The building, which was provided by a gift of \$150,000 from the General Education Board of New York City and a similar sum appropriated by the state legislature, is located on a 14-acre site, and covers a floor space of more than two acres. It contains an auditorium, with accommodations for 400 persons, the main offices, a library, a cafeteria, and a gymnasium. The elementary school contains the kindergarten and the first six grades, each grade comprising a large classroom

SCHOOL-BUILDING PROGRAMS

School building programs, scientifically conducted, have therefore become important features of the whole school building program. The public now insists upon knowing (1) what kind of school organization is to be housed in the new building; (2) whether the proposed accommodations guarantee a just return to pupils for the time spent in school and to the community for the money expended; (3) trends, shifts, and increase or decrease in total and pupil population over a period of years; (4) what will it cost? These factors can be determined only after a thorough and scientific study of the school plant has been made and a careful estimate presented covering both present and future needs.

— HuBert C. Eicher,

Director School Buildings, Pennsylvania



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and a smaller group room for use in individual instruction. The high-school division is similar to the elementary school, with the rooms divided into large classrooms and small group rooms for individual instruction. The entire school is under the direction of Prof. Sherman G. Crayton.

♦ Cleveland, Ohio. More than \$3,300,000 has been invested in new suburban school buildings this year, according to a recent statement of the school authorities. At least five new schools were opened to pupils with the beginning of the new school term. The new Kirk Junior High School, erected at a cost of \$1,200,000, houses pupils of the seventh, eighth, and ninth grades in five schools. Students of Euclid occupied the new addition to the Central High School, which contains 20 rooms and cost \$325,000.

The school board has outlined plans for financing a proposed \$4,500,000 school-building program for the school year 1931. The board members have asked for a tax levy of five-tenths of a mill to raise funds which, in addition to \$1,000,000 now available, is considered sufficient for the contemplated program. The program would provide new buildings for three high schools, and additions for three elementary schools and one junior high school.

♦ Concordia, Kans. A junior high school has been completed, at a cost of approximately \$330,000. All pupils enrolled in grades seven to twelve have been housed in the new building.

♦ A 19-room school building, costing \$200,000, was presented to the school district of Newport township, near Wilkes-Barre, Pa., by four coal companies. The structure, which was built and paid for by the companies, was erected under an agreement with the board to replace a frame building erected many years ago, and another building which had been damaged by a mine subsidence.

The plans, which called for a modern building, with up-to-date appliances, were approved by the school board. It is estimated that a large saving has been effected, \$15,000 alone being saved in the fees of the tax collector and treasurer. None of the individual taxpayers will be taxed to pay for

the building, the entire cost having been borne by the four cooperating companies.

♦ The voters of Berkeley, Calif., recently defeated a school-bond proposition, due to a state law which makes necessary a two-thirds' favorable vote to pass a bond issue. At the school election, two bond elections were considered simultaneously, namely, one for the high school and one for the elementary schools.

The failure of the school-bond issue has been attributed to the depressed business conditions and to the fact that the bonds were opposed by the slogan of a local group which is advocating the pay-as-you-go plan. It has been found impossible to pay for major building operations out of current funds where the school authorities are confronted with a rapidly growing population and a neglected building program of several years' standing.

♦ Chicago, Ill. Three junior high schools were opened with the beginning of the fall term in September. It is planned to open three additional schools later in the term.

♦ Cleveland, Ohio. The school board has limited its requests at the November election to a renewal of its .5-mill building levy for five years, and will not ask for a school-bond issue for a building program. It is planned to erect three high schools and additions to four schools on the pay-as-you-go plan, without the submission of a bond issue to the voters. While the issuance of bonds cannot be entirely discontinued in the next five years, it is believed the amounts requested will be far below those of the past five years.

The tax levy for building will place the board closer to a 100-per-cent pay-as-you-go plan than it

In selecting your architectural adviser, go about it in the same logical way in which you would choose your legal or medical adviser; namely, on the basis of knowledge of his natural ability, training, practical experience, and professional standing.—Illinois Society of Architects.

has been since 1911. One half of a mill gives the board an annual revenue of \$1,100,000 and permits substantial savings in interest charges under the pay-as-you-go plan.

♦ A new junior high school at East Cleveland, Ohio, erected at a cost of \$1,125,000, was opened at the beginning of the fall term in September.

♦ Caney, Kans. The junior and senior high schools have recently been consolidated and will be housed in the building previously occupied by the high school. The two schools will be supervised by one principal.

♦ The Strong Vincent High School, the newest school building at Erie, Pa., was opened for use on September 8, with a large enrollment of students. The building, which has accommodations for 1,755 students, contains 30 regular classrooms, etc., a floor space of 3½ acres, and was erected at a cost of \$1,325,000.

♦ The Townsend Harris High School will be the highest high school in New York City, when this preparatory department of City College moves from the college building to its new home in the City College of Business building on Lexington Avenue and 23d St. The high school will occupy the ninth, tenth, eleventh, and twelfth floors of the building.

♦ Lockport, Ill. An addition to the township high school was recently completed, at a cost of \$250,000. The building, which is fireproof in construction, provides space for a large gymnasium, and rooms for the expansion of the special departments of the school.

SKYSCRAPER SCHOOL-ADMINISTRATION BUILDING

The New York City board of education contemplates the construction of a 25-story building for its administrative headquarters. "The new building," said Dr. Harold G. Campbell, deputy superintendent of schools, "will coordinate all the activities under one roof and make for better administration of the system. Too much time is now lost because so many important branches are scattered about in other buildings." The new building will cost approximately \$4,000,000.

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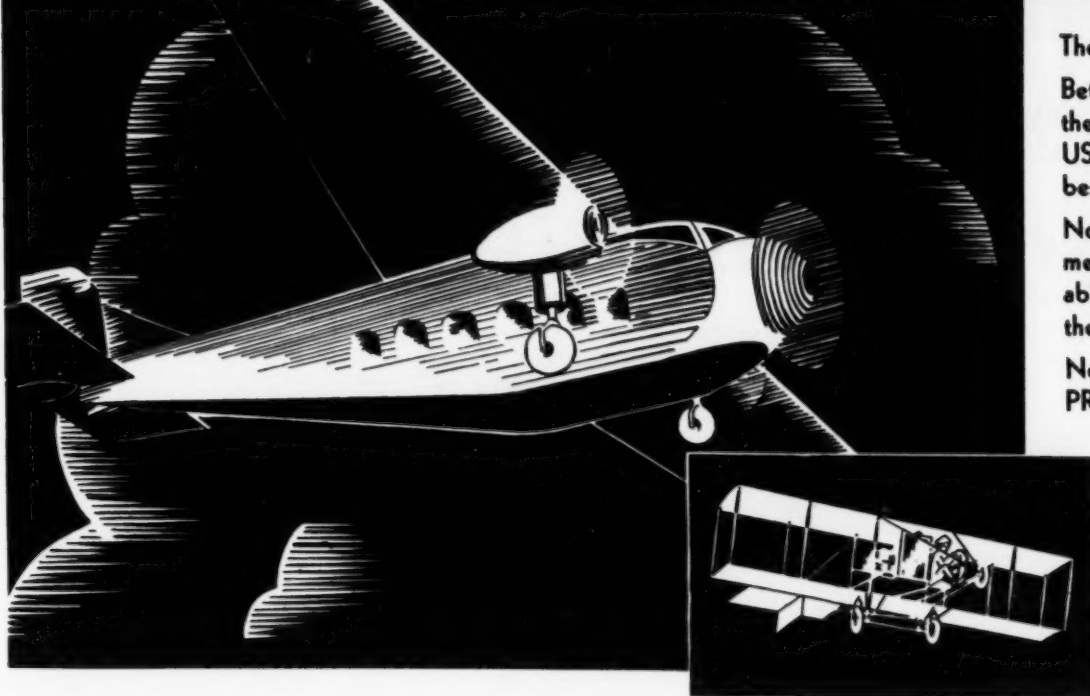
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ARKANSAS ISSUES SCHOOL SECURITIES

As a move toward speeding the construction of approximately \$1,000,000 worth of new school buildings throughout the state, and to aid the drought-relief program, the state-debt board of Arkansas recently authorized the issuance of \$814,000 worth of state bonds to complete the repayment of the state's loan of \$1,314,000 from the permanent school fund. Similar bonds were issued in 1929 to pay \$500,000 of the loan.

The bonds were sold under authority of an act of the 1929 legislature, which provided that the state should issue bonds to repay the money borrowed from the permanent school fund for general state purposes several years ago, and that the permanent school fund be loaned to the revolving loan fund, created in 1927, to assist the rural schools in providing adequate buildings. The revolving loan fund is operated under the supervision of the state board of education, and approximately \$945,000 has been loaned to school districts since the enactment of the law.

The completion of the present loan means that more than \$300,000 has been made available to school districts of the state for immediate school-construction work.

SCHOOL OPENINGS AID BUSINESS

The reopening of classrooms in schools and colleges throughout the country will result in the expenditure of billions of dollars and will afford activity to a host of industries, services, and merchandising industries, according to a recent statement of the commodity divisions of the U. S. Department of Commerce and the U. S. Office of Education of the Department of the Interior.

The average daily attendance in the public schools alone now exceeds well over 25,000,000 and the total expenditure aggregates more than \$2,200,000,000. The total number of persons attending schools and colleges now exceeds 30,000. This includes elementary and high schools, kindergartens, teachers' colleges, and normal schools, and regular universities, colleges, and preparatory schools.

According to the division of the Department of Commerce, the schools will spend millions of dollars for the numerous articles of merchandise, services, etc., which are needed for the classrooms. School furniture—desks, blackboards, hat and coat racks, etc.—is required in large quantities in the seasonal expansion and remodeling of school buildings.

The amount of materials purchased by or for the students themselves for the technical pursuance of study runs well into the millions of dollars. Pencils, pens, ink, paper, pads, composition books, typewriters, and other items are needed for the classrooms.

While no estimates of the expenditures of parents for school clothing could be made by the Department, the shoe division estimated that the cost of furnishing school children with shoes would aggregate in the neighborhood of \$700,000,000. This is based on an average consumption of five pairs of shoes for the schoolgirl, and four pairs for the schoolboy, on an average of \$6 per pair.

The demands of persons attending schools and colleges for clothing for gymnasium and athletics also comprises a considerable figure, according to the textiles division. Besides typical wearing apparel needed for the classroom and other activities, there is a large requirement for football, basketball, track, and other athletic material.

FINANCE AND TAXATION

♦ A definite school-building program extending over a period of ten years has been proposed by Supt. R. W. Bardwell to the board of education of Madison, Wis. It contemplates accommodations for additional students—in the light of the population growth of the community.

♦ South Bend, Ind. The school system has adopted a tax levy of \$1.075 and a budget of \$3,-

063,501 for the school year 1930-31. The tax levy represents a reduction of one-half cent from that of last year, while the new income is greater by \$28,000 than last year's, due to an increase of \$3,000,000 in tax valuations.

♦ Bessemer, Mich. The school board has adopted a budget of \$88,486 for the school year 1930-31, which is nearly \$10,000 less than the past year and about \$30,000 less than five years ago.

♦ Spencer, Ind. The school board has reduced the local tax rate for schools from \$1.75 to \$1.60 on each \$100 of taxable property. The reduction means that the taxpayers will pay approximately \$3,800 less taxes for school purposes this year. The budget for the school year amounts to \$54,045, of which \$29,499 will be raised by taxation.

♦ Elkhart, Ind. The school board has adopted a tax rate of \$1.22, which will produce a total of \$573,525. The budget for the year amounts to \$620,915.

♦ Shelbyville, Ind. The school board has reduced the tax rate from \$1.18 to \$1.17, which will produce a total of \$170,096.

♦ Mishawaka, Ind. The school board has adopted a budget of \$518,000 for the operation of the schools during the next year. The budget calls for an increase in the tax levy from \$1.22 to \$1.25 in order to obviate an indebtedness in the spring of 1932.

♦ Terre Haute, Ind. The school board has adopted a budget of \$1,415,712 for the school year 1930-31. The budget exceeds the 1929 total by \$292,312 and provides for a tax levy of \$1.82 1/2.

♦ The school board of Fort Wayne, Ind., has adopted a school-tax rate of 84.6 cents, which is more than 2 cents less than that for the previous year. The new school-tax levy will produce an operating fund of \$1,966,000 and a library fund of \$116,000.

♦ Gary, Ind. The school board has retained its \$1.50 school-tax levy for the year 1931. A budget of \$3,129,288 has been adopted for the school year. The largest item is \$1,690,000 for the operation of the day schools. Of the total budget, \$1,168,028 will be derived from taxation.

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School-Building-Construction Economies

School-Board Business Administration

Article VI—Part 5

George F. Womrath, Minneapolis, Minnesota

23. Door hooks and other cheap devices can be used to hold doors open instead of automatic door catches. Is the saving defensible?

As compared with the cost of automatic door holders, the use of cheap door hooks will save, approximately, \$15 per door, or \$30 per entrance when double-hung doors are used.

Not infrequently door holders are omitted entirely. This results in some would-be mechanic applying hooks and cleats which mar and cut the woodwork and often gouge deep grooves in valuable stonework. All such contrivances should be avoided and preference given to one of the many types of automatic door catches which protect both door and woodwork, and involves practically no maintenance cost whatever.

In the absence of automatic catches, doors blow shut and slam. This results in considerable damage to door and door frame.

The argument that automatic catches hold the doors open in cold weather and cause the building to become chilled and resulting in a great waste of fuel is tenable only if the supervision of entrance doors is admitted not to be an administrative function.

24. Is an expensive granite entrance door sill an extravagance?

Wear and tear are important items to consider. Door sills which are made of a soft material, such as wood, cement, and slate, will save in original cost, but will soon become cupped and present a very dangerous hazard for school children who must cross them several times every schoolday.

Cement and slate sill have a life of from 10 to 12 years and are then generally found to be so badly worn and cupped as to require renewal. Cupped door sills in winter admit large amounts of cold air under the doors. Wood lasts as long as slate and can be repaired much more easily and at much less cost, but should not be considered at all. Ordinary iron sills are slippery and dangerous. Granite sills are durable and safe, and afford an unquestioned economy in maintenance cost.

25. Are foot scrapers worth their cost to install?

Foot scrapers and mud pans at entrances to school buildings prevent large quantities of dirt and water being dragged into the buildings. Their use saves floor treatment and wear, as sharp sand, when kept in motion by the shuffling of feet of children, forms a perfect abradant.

Foot scrapers save janitorial service. Mud carried into schoolhouses introduces two separate and distinct janitorial operations, namely, sweeping up the dirt when the mud has dried and washing off the stain left by the mud and water.

Foot scrapers built into the floor just inside every entrance door, with an easily removable dirt pan under each scraper, afford an easy way to remove from shoes much mud, water, and dirt which would otherwise be tracked into the buildings.

26. Shall plate glass be used in doors and windows?

Plate glass formerly was considered necessary for all outside and inside windows and doors of school buildings. The present practice is to use small lights of double-strength AA glass for outside windows and inside doors, and wired glass for outside doors and one or two

lights next to the handles of glazed classroom doors. All glass might be single-strength common run glass and thus save several hundreds of dollars on a building, but this saving would be offset by distorted light and breakage. Serious injury to children has occurred when they have accidentally put their hands through poor quality, cheap glass in doors. Shatter-proof glass and violet-ray glass are coming into use in place of wired glass.

Plate glass used anywhere in a school building is an extravagance when compared with the high-grade, double-strength, selected AA glass of modern manufacture. The lower cost of the latter is noteworthy, as glass breakage is a very considerable item of maintenance expense in all school buildings.

"The chief-engineer of the board of education has recently prepared a 5-year report on glass breakage in Chicago public-school buildings.

1924	\$ 71,948
1925	86,000
1926	110,246
1927	144,340
1928	158,185

Five-year total \$570,719

"The Chicago newspapers believe this is chargeable to the 'play ball' spirit of youth living in restricted confines. Perhaps the sociologists can tell us what percentage is due to accidents of play, and what percentage is due to intentional mischief. How much of the latter is remedial through character education in the schools?"

Rigid rules, and their strict enforcement, requiring all glass breakage to be promptly reported, with name of person responsible for the breakage and cause of breakage, has, in nearly every instance where this procedure has been introduced, resulted in a very considerable reduction in the amount of glass broken, and has put into practice a system of supervision and investigation the direct outcome of which has been a very noticeable elimination of carelessness and mischief, and a corresponding reduction in glass breakage. This system might be practiced with corresponding success in many other fields of school physical plant administration.

Perhaps the greatest contributing cause to the elimination of expensive plate glass has been the substitution of small lights in windows and doors for the large lights formerly used.

The following definitions taken from the 1927 *Complete Window Glass Specifications* of the American Window Glass Company will be helpful in the selection of glass and in the preparation of specifications:

Double-strength window glass of AA quality, free of reams, strings, lines and burn specks. This quality requires the best grade of glass but it does not require perfect glass. As a matter of fact, it is impossible to produce flawless glass of any kind. Defects of various kinds are permissible in this quality but they should be very slight, or not discoverable except on close inspection.

Double-strength window glass of A quality. Strings, lines, or burn specks shall not be of such intensity that they are visible when observing the sheet at an angle greater than 30 degrees between the line of sight and the glass.

Avoid the use of B quality glass. In general, the defects permitted in this glass are so prominent as to at once attract the attention of the casual inspector.

¹SCHOOL BOARD JOURNAL, July, 1929.

The manufacturer's label should be required on each light of glass delivered to the building.

27. Flooring.

No other feature of schoolhouse construction has been given more consideration than the material which should be used for floors. Wood, cement, tile, asphalt, rubberstone, linoleum, mastic, terrazzo, cork, and many other materials have been used with more or less success.

In the selection of a flooring the appearance of the floor has often been the deciding factor, whereas durability, ease of cleaning, and maintenance cost should have careful consideration. The cost and utility of various kinds of materials should be compared and that adopted which is the least expensive commensurate with utility and longevity.

In selecting a floor material, consideration should be given to such pertinent questions as:

Can seats be easily fastened to the floor?

If seats are changed frequently, will the floor be damaged by reason of many screw holes?

Will the material shrink and require constant tightening of screws in the feet of desks to keep them from shaking?

Will the floor be soft and sticky?

Will the floor be cold, hard and noisy?

Will the hardness of the floor be hurtful to the feet of pupils?

Will the hardness of the floor cause breaking of manual training tools which may be dropped upon them?

Will the softness of the floor cause it to be damaged if pianos and heavy furniture are moved across it, and will heavy equipment sink into it leaving it full of bumps and holes?

Not infrequently the faulty installation of an otherwise excellent floor material builds up subsequent maintenance costs as much as does the selection of a poor or an inappropriate kind of flooring in the first place.

A floor laid with badly matched flooring and presenting a rough, uneven surface when laid and requiring sanding, is costly to install and the sanding destroys and scuffs the hard glazed surface of the lumber and renders it porous, hard to keep clean, and hard to treat with floor dressing and preservative. Such flooring soon becomes black and unsightly.

The kind of service to which the floor is subjected when in use and the educational work carried on in each room will govern, to a large extent, the floor material that should be used. Separate consideration should be given:

Steps	Classrooms	Auditorium
Vestibules	Laboratories	Gymnasium
Corridors	Toilet rooms	Shops

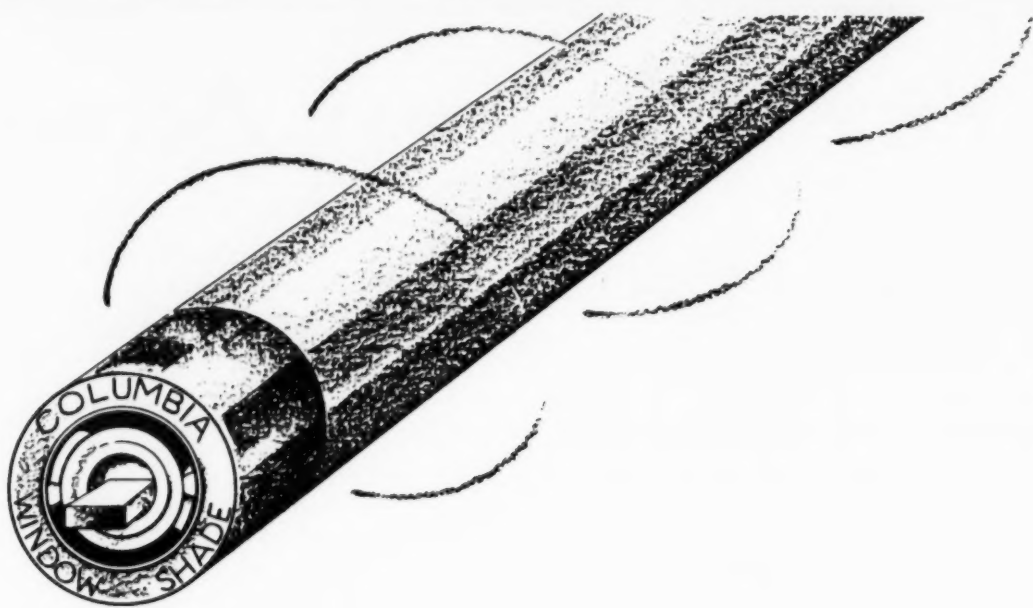
For comparative purposes the following average costs of various kinds of flooring are given:


Wood (maple)	30c per sq. ft.
Cement	18c to 20c per sq. ft., to which 2c per sq. ft. should be added for hardening.
Rubberstone	35c per sq. ft.
Mastic	30c to 35c per sq. ft.
Red Quarrie Tile	50c per sq. ft.
Terrazzo	40c to 60c per sq. ft.

The 9 most important factors¹ to consider in the selection of schoolhouse flooring are:

1. Comfort for the feet—neither too hard nor too soft and a nonconductor
2. Reasonably noiseless in movement
3. Durability of wear



¹"The Problem of Flooring in Schoolhouses," by Julius W. Miller, in SCHOOL BOARD JOURNAL, January, 1929.




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trigger shootin'-iron  Quiet as a goldfish in a globe 

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Thousands of Grinding Feet Cannot Harm Rubber Floors in this Washington Building Since Protected by Rubber-Var

"IN spite of extremely congested conditions," reports* Mr. V. Buchs, superintendent, in reference to the customers' rooms of H. B. Hibbs & Co., brokers, Washington, D. C., "and severe usage by thousands of people who daily grind cigar and cigarette ashes and butts into the floor the easily applied Rubber-Var keeps these rubber floors highly polished and fresh appearing without making them slippery. Where ordinary cleaning left the flooring dull and discolored, Rubber-Var restores the original color and lustre."



Rubber-Var, used regularly on 1,350 sq. ft. of rubber flooring in brokers' customers' rooms in H. B. Hibbs & Co. Building, Washington, D. C., keeps the floors in perfect condition in spite of extremely heavy traffic and hard usage

Rubber-Var—what it is

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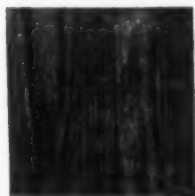
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For treating wood, linoleum, mastic, concrete, cork, etc. Gives same desirable results as Rubber-Var. Comes in "natural" and popular colors. Car-Na-Var in color eliminates a separate application of stain.

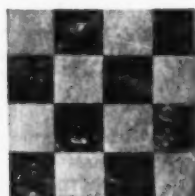
* From a certified Gould Report

RUBBER-VAR
FOR TREATING RUBBER FLOORS

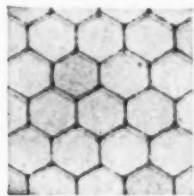
Also Car-Na-Var—the perfect floor treatment



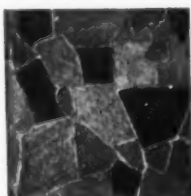
Wood (Car-Na-Var)



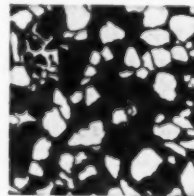
Linoleum (Car-Na-Var)



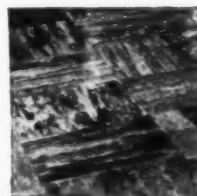
Quarry Tile (Car-Na-Var)



Slate (Car-Na-Var)



Terrazzo (Rubber-Var)



Rubber (Rubber-Var)

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sq. ft. floors

sq. ft. floors

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"IN spite of extremely congested conditions," reports* Mr. V. Buchs, superintendent, in reference to the customers' rooms of H. B. Hibbs & Co., brokers, Washington, D. C., "and severe usage by thousands of people who daily grind cigar and cigarette ashes and butts into the floor the easily applied Rubber-Var keeps these rubber floors highly polished and fresh appearing without making them slippery. Where ordinary cleaning left the flooring dull and discolored, Rubber-Var restores the original color and lustre."



Rubber-Var, used regularly on 1,350 sq. ft. of rubber flooring in brokers' customers' rooms in H. B. Hibbs & Co. Building, Washington, D. C., keeps the floors in perfect condition in spite of extremely heavy traffic and hard usage

Rubber-Var—what it is

Rubber-Var is a scientific combination of varnish gum and waxes. It gives a beautiful, lustrous, yet non-slippery finish to rubber, soft composition and light colored terrazzo floors . . . protects the surface indefinitely from wear . . . and cuts maintenance costs as much as 50%.

Rubber-Var wears 3 times as long as varnish or floor wax. It is easily applied with a mop and is ready for traffic in an hour. Worn spots can be repaired without showing overlaps. Rubber-Var is waterproof.

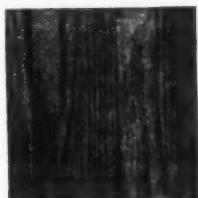
Car-Na-Var —the perfect floor treatment

For treating wood, linoleum, mastic, concrete, cork, etc. Gives same desirable results as Rubber-Var. Comes in "natural" and popular colors. Car-Na-Var in color eliminates a separate application of stain.

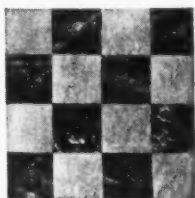
* From a certified Gould Report

RUBBER-VAR
TRADE MARK
FOR TREATING RUBBER FLOORS

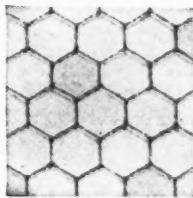
Also Car-Na-Var—the perfect floor treatment



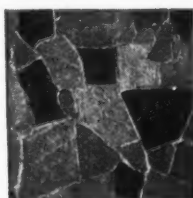
Wood (Car-Na-Var)



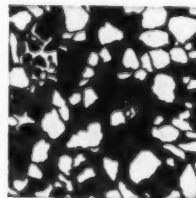
Linoleum (Car-Na-Var)



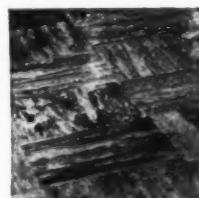
Quarry Tile (Car-Na-Var)



Slate (Car-Na-Var)

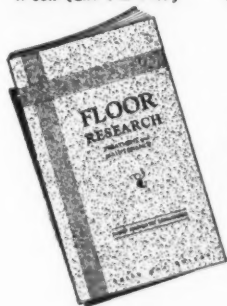


Terrazzo (Rubber-Var)



Rubber (Rubber-Var)

Above are a few of the many types of floors that can be efficiently and economically treated with Car-Na-Var or Rubber-Var



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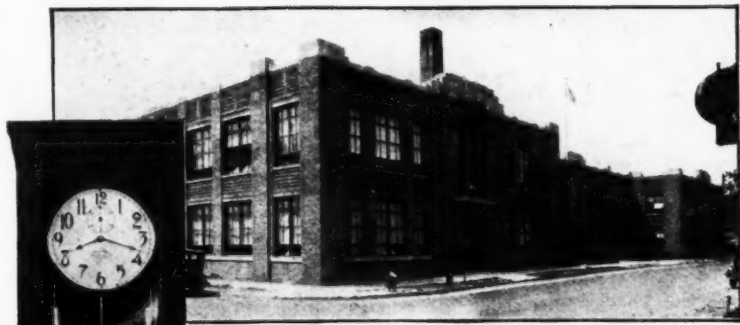
Every man interested in the efficient and economical maintenance of floors should have a copy of "Floor Research". Written by a nationally known floor consultant. Contains 48 pages of concise, helpful information. The only book of its kind. Sent to you with our compliments. Mail coupon at right.

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Without obligation send me FREE copy of "Floor Research". Also send me further details about Car-Na-Var and your FREE TEST offer.

Name.....
Address.....
By.....
total approximate area.....sq. ft.....kind.....present treatment (oiled, waxed, etc.).....
We have.....sq. ft.....floors.....
.....sq. ft.....floors.....

Supervised Control



WILBUR WRIGHT SCHOOL, DETROIT, MICHIGAN

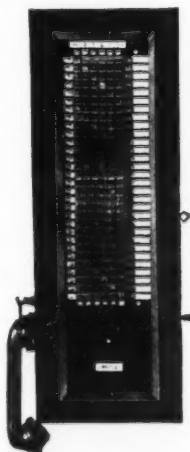
of School Time

IN the Wilbur Wright School at Detroit, Michigan, where those who *supervise* school activities are trained in modern methods of administration, International Hourly Supervised Electric Time and Program Equipment has been established as the most efficient means of controlling school time.

By placing all time indicating and program control devices under the principle of hourly supervision, International Equipment eliminates waste of effort, hurry and confusion. Operates from either A.C. or D.C. without batteries.

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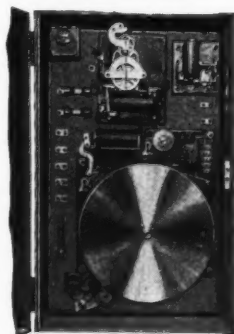
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The Hewlett School wardrobes are the Dual Operating type. The left-hand door of each pair operates automatically when the right-hand door is moved. (Single Operating or Multiple Operating hardware can also be applied to all Fairhurst Wardrobes.)

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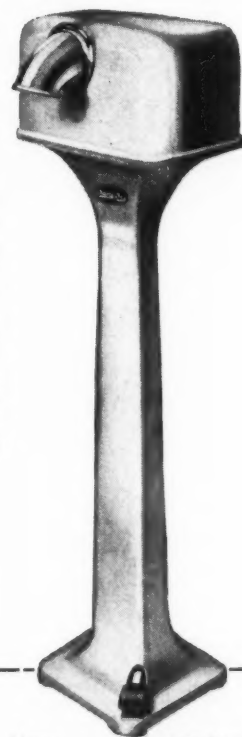
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Sani-Dri

Clean hands for every child - - - cleaner, neater washrooms - - - better child health - - - increased efficiency in the washroom! It is easy to promote personal cleanliness of a much higher standard when Sani-Dri is installed in the washrooms of your school. Economical, also, because the new "SF" Model cuts towel costs 60% to 90% in addition to reducing fire hazard from paper towel litter. Appreciated by pupils, endorsed by leading educators, and giving more than satisfactory service in hundreds of schools, large and small, throughout the country. Mail coupon today for copy of our new booklet, "The Airway to Efficiency," telling about the 12 outstanding betterments built into the new "SF" Sani-Dri.



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Electrical Division

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FOUNDRY CO.
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CHICAGO HARDWARE FOUNDRY CO.,
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Please mail me a copy of your new book, "The Airway to Efficiency," telling about the new "SF" Model Sani-Dri.

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Choose STEEL or WOOD

—both are truly portable

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. . . year around service

Circle A Portable Steel Bleachers offer the quick and easy erection of Wood Bleachers—plus the psychologically better effect of steel—and the longer life of steel.

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Both Bleachers have no small parts to get lost—can be set up by inexperienced help in a few hours' time—and taken down as fast. Useful either indoors or out—these highly efficient seats can be money makers all year around. Write today for details on both Circle A Steel and Circle A Wood—Portable Bleachers.

Also manufacturers of: Circle A Steel Grandstands—Portable and Permanent. Sectional Houses and Gymnasiums. Folding Partitions. Rolling Partitions. Kitchen Units.

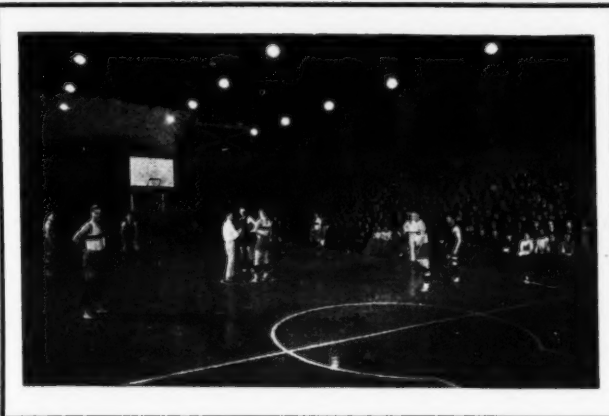
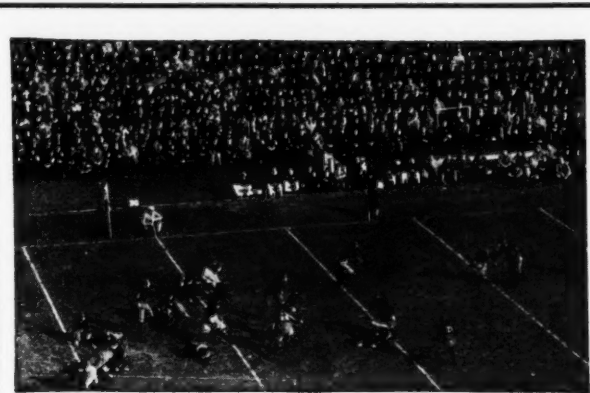
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CIRCLE A BLEACHERS

WOOD-PORTABLE STEEL-PORTABLE



(Concluded from Page 80)

of employment records. Each of these teachers had been employed in the community where the writer was superintendent, yet there were absolutely no records and of course nothing could be done for them. The matter is serious in several states like Michigan, Wisconsin, etc., because of the operation of the teachers' retirement law. It makes a man fairly sick when he cannot furnish affidavits which would help some worn-out instructor to go on the pension list.

The Remedy

And yet the remedy for this problem is a simple one. All that is needed is the exercise of the care that is used in keeping scholarship records of pupils. With rare exceptions every school takes great care in keeping records of its pupils. In Orion we have pupil records that go back almost to the Civil War. Other schools with which the writer has come in contact have just as complete and old records. Why shouldn't teachers be treated in the same way? It is not a bit difficult to set up a card record or a loose-leaf record of teachers.

Our practice is probably not original, yet it seems to fill the requirements very well. A compartment in the steel filing cabinet is set aside for cards containing the records of all teachers. These cards, filed alphabetically, contain the following information:

1. *Rating Card*—Filed for each year's teaching. (We use rating cards sold by the Michigan State Teachers Association.)

2. *General Information Card*—Contains the following data:

Date Appointed	Certificate
Name	(Last) (First) (Middle)
Home Address	
Age at Time of Appointment	
Place of Birth	
Nationality	Height
American Citizen	Weight
Married	Sex
	If married, number of children

PREPARATION

Name of School Attended.....
 How long?..... Years.....
 Date of Graduation..... Degree.....
 a) High School.....
 b) Normal School.....
 c) College or University.....
 d) Post Graduate.....

PREVIOUS TEACHING EXPERIENCE

Name of School.....
 How long?..... Years.....
 Grade or Subjects Taught.....

TRAINING SCHOOL JANITOR-ENGINEERS

The subject of improvement of janitorial service has recently had the attention of the National Association of Public-School Business Officials. A questionnaire sent to the medium-size and larger cities proceeded upon the thought that the training of school janitor-engineers demands procedure along the following lines:

1. Careful selection of men to be employed.
2. Organization of department into a working unit.
3. Definite standards of operation.
4. Some type of training whereby men are taught to do work according to established standards.
5. Rigid inspection to see that work is kept up to standards.
6. Adequate salary for work done.

The replies received deal largely with the prevailing conceptions as to character, intelligence, and physical fitness of the individual janitor, and the manner of direction and control of the janitor service.

The Selection of Janitors

The authority to appoint the school janitor-engineer it is found, is lodged in different

hands. In cities under 30,000 population, the superintendent controls in some instances, but in most cities the choice is left to some committee of the board of education. In cities between 30,000 and 100,000 population the choice is in many instances left to the business manager, the truant officer, or the principal of the school.

In cities of 100,000 to 500,000 population the selection is frequently in the hands of the business manager, chief engineer, superintendent of buildings, or a school-board committee. In some cities a civil service examination as to "health, intelligence, mechanical skill, and ability" is exacted.

The term of employment is not definitely fixed. Some men are taken for a probationary period, and given permanent employment if found satisfactory. The wage paid varies considerably, and is largely guided by the local supply and demand for labor.

Comments and Suggestions

The association committee dealing with the janitor-engineer services attempts no general conclusions, but presents many comments made in response to the questionnaire sent out. We present some of these comments picked out at random from the report:

"Lead the janitor to see that he has an important part in the training of the children of his school.

"Give promotion to those who make good. Persistent training of younger men is urged.

"Type of training would depend on size of system. In a small system this training would have to come from actual work as a subordinate in one of the larger schools.

"Secretary-business manager has the work of the janitors in charge, but the janitor is under direction of the principal of the school in which he is employed. The business manager hires and discharges janitor-engineers.



Hartshorn Joanna Cloth, on Hartshorn Rollers equips the windows of this fine building

THE Central Institute for the Deaf, in St. Louis, Missouri, is a model of careful planning—from its pleasing, restrained architecture to its satiny-finished Joanna Cloth window shades... These shades, mounted on Hartshorn rollers, represent highest quality and enduring value, for Joanna Cloth is the supreme achieve-

ment of Hartshorn—pioneer manufacturer of dependable shade products.

Hartshorn
Est. 1860



Shade Rollers and
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STEWART HARTSHORN COMPANY
250 Fifth Avenue New York City

"Our chief method might be termed the trial-and-error method. All help hired by the week. If not reasonably satisfactory, we try someone else.

"Financial ability — pay grocery bills. Police record. Size of family. Residence. Citizen.

"Neatness, general appearance, and disposition are especially stressed, also character. We find that, on the whole, farmers make the best custodians.

"Main qualifications — will he work. Special character trait — attitude toward children.

"Preparation or training to fit him for desired position. Applicant should possess sufficient intelligence.

"Good reference. Place of last employment. If ever arrested.

"Record of previous employment. Physical condition — 'Important that employee be sound physically.'

"General education — 'Eighth grade at least.'

"Neatness — 'Employee should be consciously neat and careful about appearance and not forced to be so.'

"Character traits — 'Loyalty to interest of the board.'

"Family relationships — 'Preferably a married man and a home owner.'

"Civil service does not mean a thing. What a man says in an examination should be done to properly maintain a building, is not necessarily what he will do if hired.

"Should be given temporary work as a try-out. If he possesses proper qualifications, he should be given permanent job, or if subject to civil service recommended for appointment. Ordinary under civil service no tryout period is allowed. The civil service advertises an examination. All comers are permitted to take the examination. Those that pass a certain grade

are placed in civil service list in order of their grades, are thus certified to board on the board's applications. When so certified the person becomes a regular permanent employee at once and it is a hard matter to separate the person from the payrolls. This is the great defect in civil service."



LOCAL AND OUTSIDE TEACHERS

The question of local versus outside teachers arose at Indiana Harbor, Ind., when it was charged that political pressure had been employed in behalf of local applicants. In response to the situation, Supt. John G. Rossman issued a statement in which he said:

"The entire teaching staff and the community must have confidence that the best interests of the children are being conserved. That confidence is easily disturbed when teachers are appointed because of political pressure or on any other basis than that of assigning the best teachers for the position. Simply because a teacher resides in the community does not mean that that teacher is the best available."

The rules adopted by the board of education last year are summarized by Superintendent Rossman as follows:

1. Other things being equal, local applicants should be given preference.
2. Only the strongest candidates should be selected — from a scholastic point of view, only

those who stand in the upper half of their class in high school and at the university.

3. Only persons licensed by the state as teachers of first rank should be considered.

4. No person licensed to teach in one field should be employed to teach in another. (This is contrary to state law and endangers the classification of the school.)

5. It is contrary to the best interests of the children to employ, in any one year, all inexperienced teachers.

6. Only that number of teachers should be employed which is necessary to maintain an economic and efficient organization.

7. Other things being equal, those persons who have demonstrated the greatest resourcefulness in their high school and college years, who have the strongest personality and who give evidence of force of character and initiative should be given first consideration.

8. Beginning with next year a series of examinations and tests should be set up to determine eligibility.

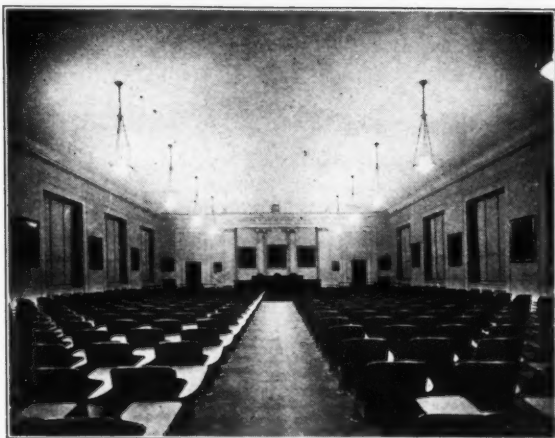
"In the case of any one local applicant," the superintendent's statement concludes, "it must be remembered that that local applicant has friends. Those friends sincerely believe that that applicant is in every way deserving. They are in no position to compare applicants, both because of lack of information and because of prejudices involved in the friendship. The solicitation of these friends becomes at times extremely embarrassing to the superintendent and annoying to the members of the board. There is, however, only one position to maintain in these instances."

BOSTON BARS NONRESIDENT TEACHERS

Beginning with September 2, the school board of Boston, Mass., has barred all nonresidents of the city from appointment as teachers in the public schools. The action was taken by the school board, after Dr. J. E. Burke, superintendent of schools,

(Concluded on Page 86)

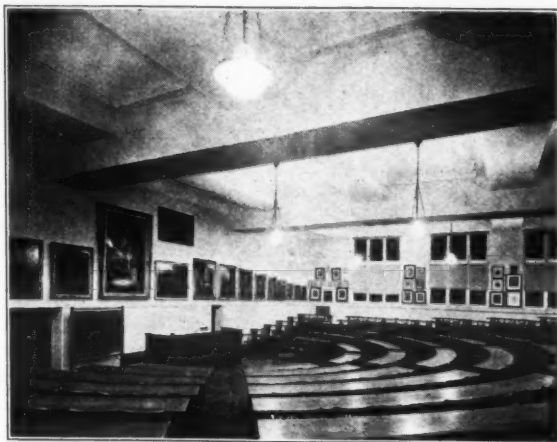
How Harvard University uses **HOLOPHANE** Lighting Units



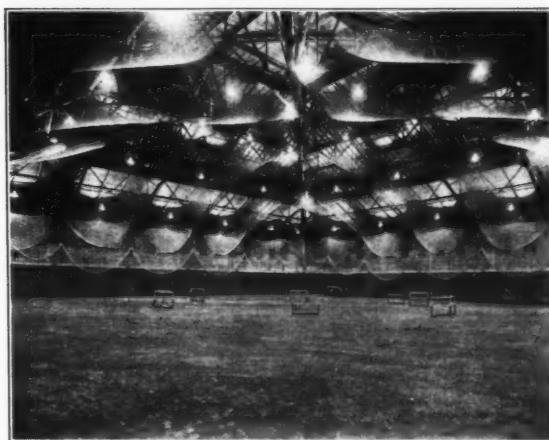
South Lecture Hall in Langdell Hall.



The North Wing Reading Room.



Court Room.



Gymnasium and Baseball Cage.

HARVARD UNIVERSITY has found that Holophane Lighting Units give the best quality of illumination, and that the Holophane principle of building a *specific* unit for each specific lighting requirement makes it possible to have the best illumination *everywhere*.

Here are shown just a few of the places in which

Harvard uses Holophane Lighting Units. Many others could be shown; for instance, the particularly interesting installation of Holophane Bookstack Units used to spread light evenly over rows of bookstacks which are only about three feet apart. These are night-time photographs—*not retouched*.

Write for booklet—"Better School Lighting."

Holophane Company, Inc.

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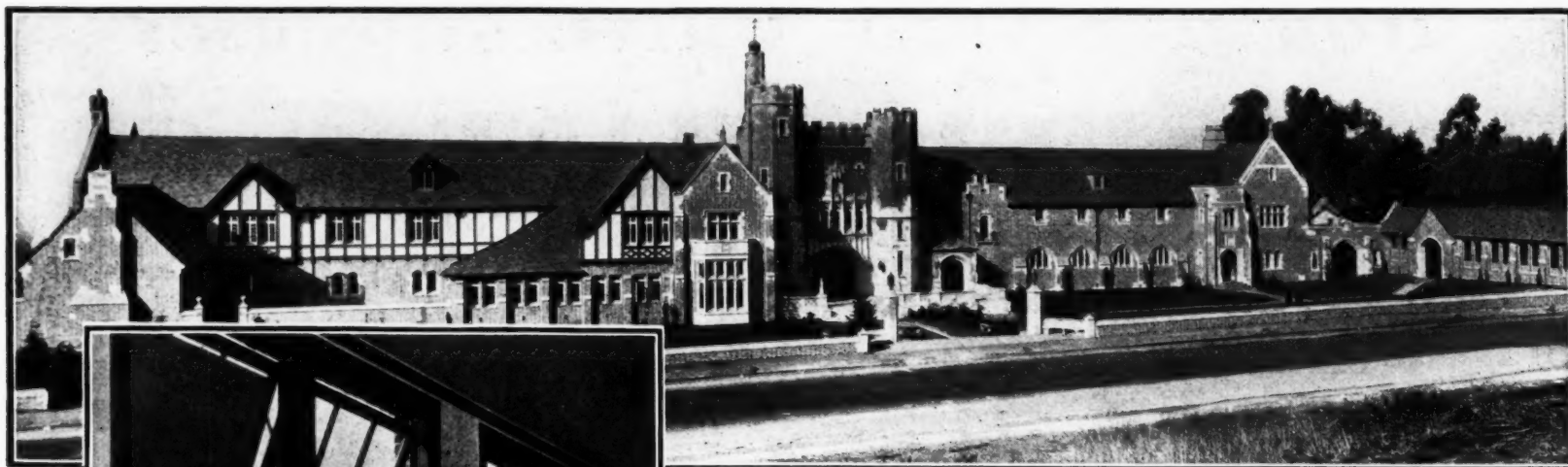
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BOSTON

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are hygienically correct. Specially adaptable for the modern needs of school buildings. Recommended and in wide use to meet lighting and ventilating requirements. Sturdy, attractive and economical.

Complete information sent on request

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(Concluded from Page 84)

and former chairman Francis C. Gray and Mrs. E. W. Pigeon had warned that its adoption would make Boston the only large progressive city in the country limiting itself to choosing its staff from residents.

In addition to barring nonresidents from the schools, the committee decided to make the teachers' college a provincial institution and to limit candidates for admission to legal residents of the city.

A third order, affecting school custodians, laborers, and others in the employ of the school department, was also passed. The order provides that no person may be appointed to any position in the employment of the schools after January 1, 1931, who is not a legal resident of the city. The order does not affect those already on the elective lists, or in the civil service lists for Boston service. It does not affect those who have been appointed to the teachers' college up to January, 1931.

TEACHERS

♦ New York, N. Y. In accordance with a new policy adopted by the board of education, substitute teachers have been assigned by the superintendent to take the places of teachers absent on sabbatical, maternity, health, or study leaves. The assignments will continue during the period of the leaves of absence, unless terminated sooner by the superintendent. If a substitute, assigned by the superintendent, renders unsatisfactory service, the principal is required to send a report of such service to the district superintendent, who forwards it with his recommendation, to the superintendent.

♦ A new form of substitute license and certificate has been issued for service in the New York City schools, which requires that each substitute teacher must present a license bearing her signature. No substitute teacher may be employed unless she possesses and exhibits a license or certificate issued for the school year 1931. At the termination of the period of service, the principal is required to certify on the license the date of service, the grade or position, the number of days of actual service, and the character of such service.

♦ Tacoma, Wash. Under a new policy of the school board, employees of the public schools are not permitted to avoid the payment of just debts by taking advantage of the federal bankruptcy laws. Employees who fail to observe the board's rule will suffer the loss of their positions.

♦ Minneapolis, Minn. The school board has begun the school year with a staff of 2,746 teachers, principals, and supervisors, which is an increase of 29 over that of last year when the number reached 2,717. The item of teachers' salaries has been increased by \$300,000 this year due to the automatic salary increases given to the teachers.

♦ New York, N. Y. A definite procedure for the assignment of substitute teachers to permanent vacancies has been announced by Pres. George J. Ryan of the board of education, ending the confusion which has prevailed since the board took from the principals the power to employ their own substitutes.

Under the new plan, only persons holding licence No. 1 will be eligible to fill long-term vacancies due to maternity or sabbatical leave of absence. Candidates will be taken according to their standing on the eligible list. Substitutes who do not hold this licence will not be eligible for assignment to these positions. The rule does not affect vacant positions filled by principals last June. It controls all assignments vacated in the future as additional teachers go on maternity or sabbatical leave. Principals still have power to employ directly the occasional substitutes needed to replace teachers absent for brief periods.

♦ New York, N. Y. A total of 4,000 teachers in the city schools will be affected by a "professional alertness" regulation of the board of superintendents, which went into effect for the first time on September 2. Under the regulation, teachers who seek the annual salary increment must complete a 30-hour course each year before they will receive the increase. Teachers who fail to complete such a course, will be denied the increase.

The courses must be taken until the teacher reaches the maximum salary of her schedule. Teachers on their maximum are encouraged to continue studying, but it is not mandatory.

A special circular, giving the various provisions of the new rule has been distributed in the schools by Supt. William J. O'Shea.

♦ More than a thousand new positions will be established in the New York City teaching and supervising corps during the school year 1931, according to a recent statement. The creation of this number of positions will offer opportunities for employment to twice that many new teachers, since the figures do not take into account replacements needed for persons who resign, retire, or leave the system for other causes.

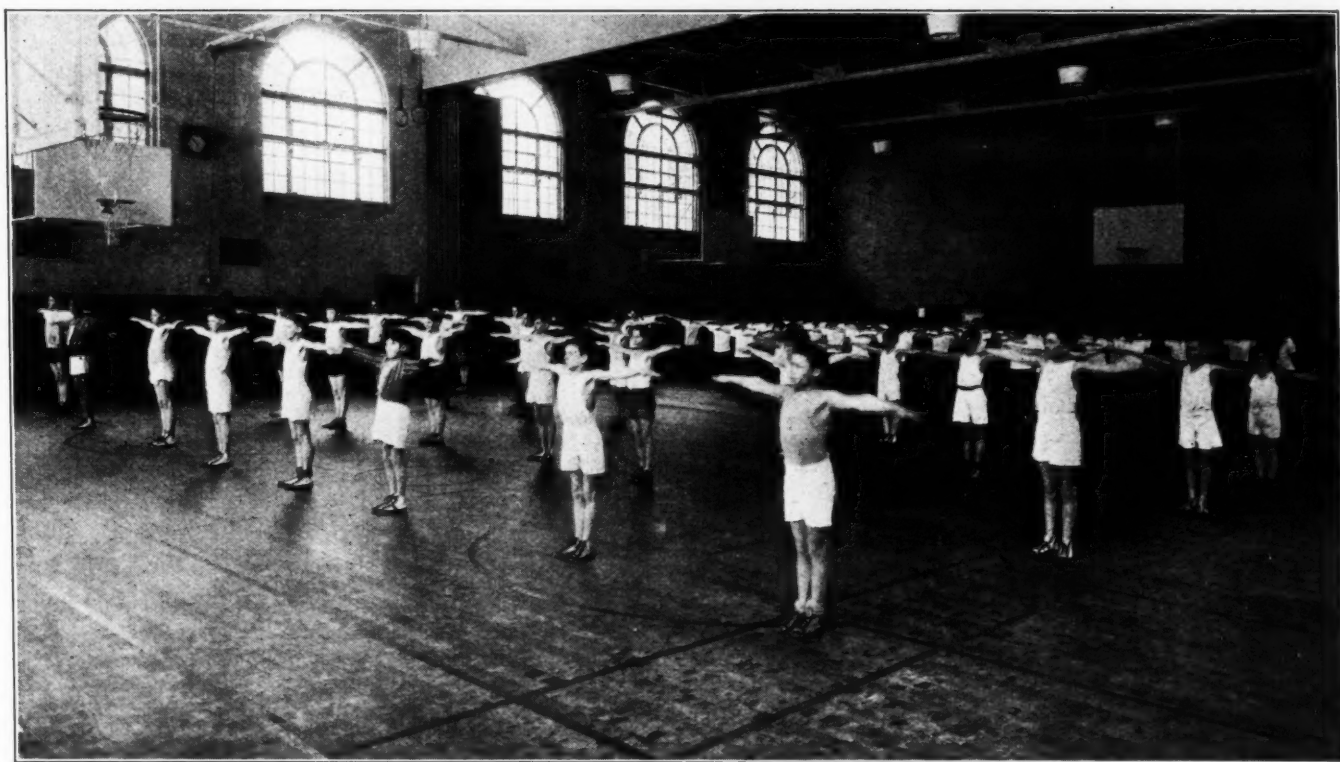
Of the new positions to be created, 540 will be in the elementary and junior high schools, where a large number of appointments will be made to reduce the average class size. The senior high schools will get 385 new positions, and the continuation schools fifteen more positions next year. Among the new positions are three district superintendencies, which will go to three administrative workers in the school headquarters building.

♦ Mr. L. L. LOUTHIAN, supervisor of teacher training in Ohio, recently conducted teacher-training tests for high-school seniors. Last year a total of 30,000 students took this test, including 90 per cent of the pupils in the twelfth grade, both public and private. The test is given regularly to measure the ability and aptitude of the students for teaching and is in a sense a test of the pupil's ability to learn.

♦ Rockford, Ill. The school board has adopted a rule, providing that supervisors, principals, and teachers attaining the age of 67 shall be retired from active service, beginning with September 1, of the school year in which the teacher attains the age limit. The rule becomes effective on January 1, 1931.

SCHOOL BUS MUST DISPLAY RED FLAG

The State of Mississippi has recently passed a law, which requires that all school busses display red warning flags. The flags which are 18 by 24 in. in size, are lettered with the word School in white, and are attached two in the front, and two in the rear of the busses.



*A Bloxonend Floor in the gymnasium of the Washington Junior High School, Pontiac, Mich.
Malcomson & Higginbotham, Architects.*

A Good Floor "Peps Up" any Gym Class

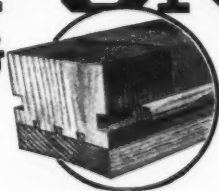
To a gym class, a floor of BLOXONEND is as invigorating as a pasture to a horse. The thrill of a beautiful expanse of floor space . . . the realization that the surface is firm and speedy, yet inherently resilient . . . the feeling of safety and security in knowing that end-grain means sure footing and freedom from splinters . . . children need no urge to action on BLOXONEND gymnasium floors — the "get-away" is spontaneous.

To a School Board, a floor of BLOXONEND is an investment that pays big dividends . . . The material is as durable as the walls and foundation of the building . . . Upkeep cost practically nil . . . The floor is susceptible to any desired finish and can be successfully utilized for dancing, calisthenics, games and all type of gym or auditorium activity . . . Equally good for replacing worn gym floors. . . . Tell us about your floor problems. Perhaps we can help you.

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BLOX-ON-END FLOORING



Bloxonend is made of Southern Pine with the tough end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards.

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Stays Smooth*

*Leading School Architects specify
Bloxonend Floors for Shops and
Gymnasiums in the country's best
schools.*



Book News and Reviews

Points Governing the Selection of Books for Elementary and Intermediate Grades¹

Beulah Haynes, Librarian, Hardy Memorial Library, Richard City, Tenn.

As the child's ability to read increases, the field of books broadens, and the types of reading material available become more numerous. The importance of carefully selecting the books placed within his reach thus increases. By the time the child has reached the fourth grade he has, to some extent, mastered the technique of reading. Children are not too young at the age of 9 to understand and appreciate good literature. After the mechanics of reading have been mastered, boys and girls should immediately be supplied with all the good books they can use.

It has been well said that "all elementary libraries should contain as complete a collection as possible of standard books of children's literature in the best editions the library can afford." Careful selection is necessary, because no library should, or is able, to buy everything issued. There should constantly be added new titles of the latest books in every field in which children of this age are interested.

The selection of books for the children's collection is one of the most delightful phases of library work. It is always more fascinating if the books themselves are at hand, so that the librarian need not work from lists. Whichever method is used in selecting, it should be done with special care, even when there is plenty of money; for every library should develop a permanent collection of permanent value. If there is a question as to the suitability of a book, the purchase should be delayed until the librarian is sure.

Five Considerations

The selection of books for boys and girls of this age must be governed by five considerations: (1) the needs of the pupils and the teachers in relation to their classroom work; (2) the child's interests; (3) the content of the books; (4) the physical make-up of the books; (5) the effect or influence the books may have upon the child.

It is the needs of the pupils and the teachers in relation to their classroom work that is given first consideration in selecting books for the library which serves a school. Therefore, it is necessary for the librarian to know the courses of study of each grade, and to keep up with what the grades are doing at all times. She should know just what each teacher is going to take up next, in order that she may be on the lookout for new material and have the books giving information the children will want, waiting for them when they are ready for it. In order to meet these needs as she should, the librarian must know each teacher's interests and her methods of teaching.

It is important that the librarian keep on the watch for new books, select and purchase them if they meet the needs. Teachers in the schools which the writer serves, are encouraged to make notes of the books they want, on order cards provided for that purpose. They turn these cards in to the library, to be filed with other notes considered for ordering.

Of course, the librarian must always keep in mind the content of the library, lest duplication occur.

¹Abstract of paper read at the Tennessee Teachers' Association, April, 1930.

The Interests of the Child

The first thing that a child demands in a book is that it be interesting. Unless a child reads books with satisfaction, there may be developed in him a distaste for good literature. There is danger "of a distaste for, then a turning away from, and finally a complete forgetting of what literature has taught him." The importance of having boys and girls interested in what they read cannot be overestimated; for their interest causes them to remember the story longer and creates a desire for more. If teachers and librarians could determine what children's interests are, it would be a big step toward the solution of the problem of book selection.

Every teacher knows that boys and girls in the elementary grades are not just interested in books, nor do they want them to be. Children are interested in people, real people, in life, real life, and unless the library put books before them that portray real life, teachers are not going to be able to hold their interest. Children are full of life and action and want to see themselves reflected in what they read.

When Life-Interests Come

The fourth-grade boy and girl are still interested in fairy tales to some extent, but by this time they are living more in a real world than in a world of fancy. It is interesting to notice the emergence from fancy into fact. Boys change more rapidly than girls. Both have been reading picture books and easy books mostly, but now they have begun to read longer stories. By the time they are 10 years old, they are not much interested in fairy tales. Their background of experience is spreading out. They are beginning to take an interest in real life. Child life

EDUCATE TO USE BOOKS

The task of educating public officials and professional groups to the idea that books are necessary tools for their work is an enormous one, and cannot be accomplished by the unaided efforts of any one group; whether schools, libraries, publishers, or booksellers. The sad fact is that so far the combined efforts of these groups have been comparatively unsuccessful. And our ineffective educational system is primarily responsible for this lack of success. The evidence is overwhelming that our college graduates often have never started — much less continued — the cultivation of intellectual interests after college; even our doctors of philosophy, our college and university professors, not without reason, are suspected in some circles of not following their specialties with anything like an appropriate zeal; and I am afraid a careful investigation would not show a high average of genuine cultural interest — the investment of time and money in automobiles, radios, bridge, and the talkies in the great majority of cases will far exceed the investment in books. — W. T. Couch.

in other lands becomes more interesting to them; in fact, stories of real life everywhere hold them.

Boys of the elementary grades like books of war, scouting, school, and sports. They also like adventure of the more peaceful type. Girls of this age like books on home and school life, and love stories. Whatever they read, if it is to interest them, it must be written in story form. It must not be cluttered with description, nor overloaded with detail. In every case, there must be actual heroes of outstanding personalities, clearly defined characters, and rapidly moving action. Books may be piled mountain high around boys and girls, but unless they contain characters of striking personalities, the children will not bother with them. It is adults who like books on ideals and abstract subjects, not woven around characters. Children want living characters, those that are brave, honorable, and true. They want them to have strength of muscle and courage. They want them to be daring. Boys want hairbreadth escapes and jolly good friendships.

A New York Study

Dr. Jordan, of the University of North Carolina, in some investigations of children's interests in eight libraries in and around New York City, found that the interests of boys and girls in reading are very different. The major interests of boys from 10 to 13 years in reading he located in four general types of fiction: (1) books concerned with war and scouting; (2) books concerned with school and sports; (3) those concerned with boy scouts; (4) those concerned with strenuous adventure.

In his study, books concerned with war and scouting constituted 32 per cent of the total books of fiction read; school and sports books 29 per cent; books on boy scouts 16 per cent; and books of strenuous adventure, 23 per cent.

In nonfiction, Dr. Jordan found that the interest centers around what-and-how-to-do books. Books on airplanes, submarines, kites, engines, puzzles, and magic were in certain seasons very much sought after. Interest in biography and history is confined to those authors who can write biography and history in the form of an exciting story.

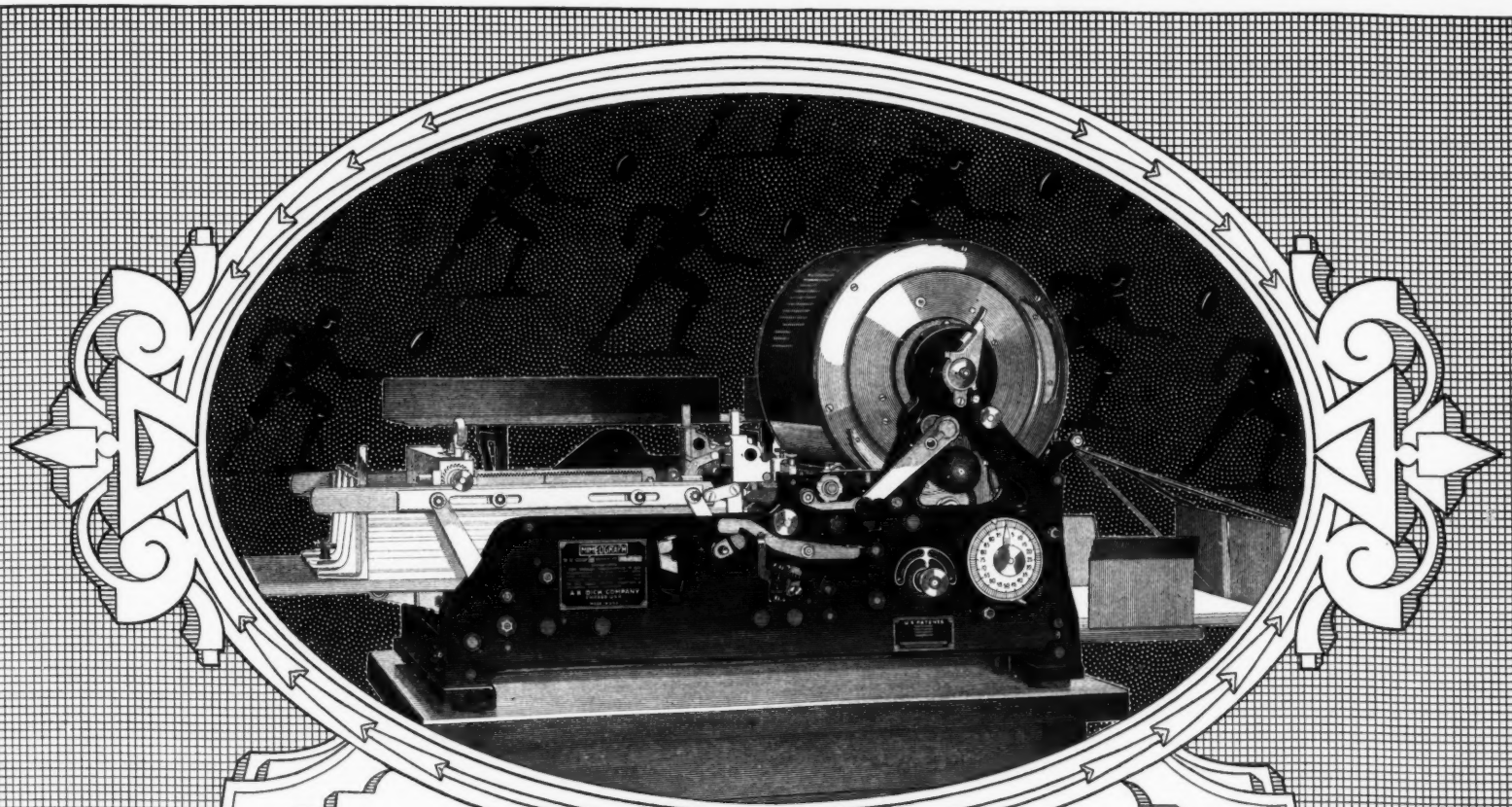
Dr. Jordan found further, that the interest of girls is principally concerned with fiction which portrays home and school life, books of fairy tales, love stories, and books of historical background. Thirty-seven per cent of the books read by girls was concerned with home, 19 per cent with home and school, 15 per cent with school, 6 per cent with fairy tales, 6 per cent with stories of historical background, and 7 per cent with love stories.

Girls' Tastes

From an analysis of the books most read, the investigator found that the majority of the most popular writers appeal largely to the instincts of maternal love, kindness, attention to others, response to approval and scornful behavior, and to a less degree than in boys, to rivalry. Except for a few books on cooking, crocheting, dramatics, and poetry, girls show little interest in nonfiction.

It may be urged that "children's tastes should be respected, but they should also be constantly enlarged by familiar association with books beyond the taste of the moment." It is wiser to follow the lead of the child's expressed interest than to force upon him the teacher's ideas of what he ought to read. With the broadening of his interests, the teacher may lead him gradually to a wider field of reading, by casually placing in his way desirable books which link up with what he is learning and thinking. The child's interest in the real world should be recognized and encouraged by the person who selects his books.

(Concluded on Page 90)



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The Content of the Book

The content of a book for children must be that which will interest the child who is to read it. To do this it should be related to his experience and within the realm of his imagination and understanding. In addition to reflecting the child's experiences, the book must broaden them and reveal new interests. Librarians and teachers want to select books that will bring some kind of pleasure. Let them ask themselves what kind the proposed book gives. Would they be willing for boys and girls to read it a second time? The main thing about a book is not what it says, but what it suggests.

Teachers want the content of a book to have a universal appeal, but they also want to appeal to the child's immediate interest. There must be a plot—a beginning, leading up to a crisis, and an ending. Let teachers ask: Is the book written in a language that the child can understand? Does it have a vocabulary suitable to the grade for which it is being selected? Is the story supplemented by appropriate illustrations?

If it is a book of the work type, are there suggestions and questions to bring out the fundamental character and purpose of each section? Does the book provide for purposeful reading, making the reader conscious of his growing power and stimulating the independent use of this power? Does this book encourage the reading of other books? Does it have a table of contents, and a good index, if needed? Will the book be used now? If not, would it be better to put the money into one that will be? Do we have a book that will answer the same purpose already in the library?

In all types of literature, except fairy tales, books of fancy, and nonsense books, there should be truth to human experience. Opdyke, of Johns Hopkins University, says that the

content of literature should possess adaptability, comprehensiveness, variety, and teachability.

I think all educators should be sure to select the classroom library books difficult enough to offer adequate challenge to the most gifted pupil in the room, and others easy enough to be read with satisfaction by the poorest reader.

The Physical Make-up of the Book

General attractiveness of a book, both inside and out, is a very important feature. In the school library, it almost means that the book will be read. The external attractiveness catches the child's eye. He takes the book from the shelves. If he likes the internal appearance as well, he usually keeps it; if not, the book goes back to the shelf.

As to "mechanical durability" the book should be well put together in a good binding. Library buckram is, perhaps, the most serviceable. Shall schools and libraries buy books in resewed binding or publisher's binding? I prefer to select and buy books in the publisher's binding and have them rebound when they become loose and worn.

There are further questions to be considered in judging the readableness of a book: What is the quality and finish of the paper? Is it not too highly glazed? Is the spacing good? Are the margins wide enough? Is the type sufficiently large? What is the length of the lines? Are the illustrations clear and suitable to the reading matter? An illustration should not divide the content on a page.

Significant Books Needed

Educators and librarians should select books that will extend and make significant the experiences of boys and girls and increase their stock of information: books that will stimulate their thinking powers and elevate their tastes and ideals. Boys and girls need books that will

develop strong motives and permanent interests in reading. Let every educator ask himself if a book tends to develop taste for the finest and best literature. Will it stimulate growth toward increasingly higher levels in literary appreciation?

Undesirable books belong to one of two classes: Books that are merely worthless, and books that are directly harmful. Books of positive value should be chosen. Teachers want a story to have a moral, but it must not be too outstanding. In other words, they do not want the book to sound "preachy." Schools and libraries should not put books before a child that present evil in such a way as to lead him to do wrong. In books which children read, the line should clearly be drawn between right and wrong. A book should not destroy beauty for a child, or place him in the wrong attitude toward life. A boy should not read too many "blood-and-thunder" stories, nor a girl too many exaggerated sentimental stories, lest they become discontented with simple life and seek to put an exaggerated story into practice.

The schools must not place in the hands of children books that will cause them to do wrong. Children need books that will cultivate an appreciation of the beautiful, and that will arouse a desire for further reading of good literature.

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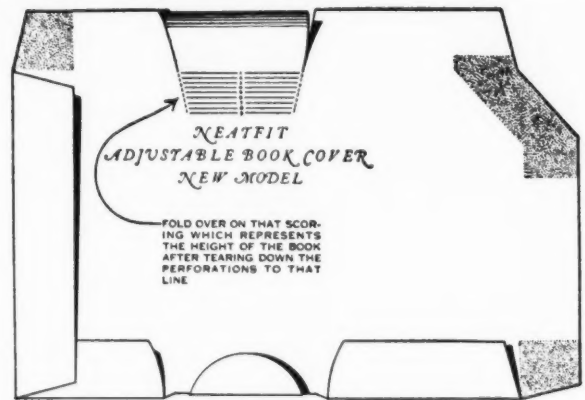
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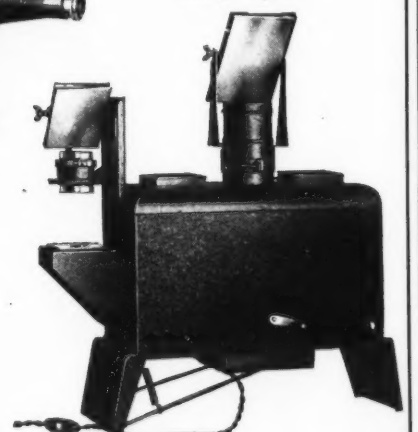
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Practical Statistics for Teachers

By Marion E. MacDonald. Paper, 194 pages. Price, \$1.60. The Macmillan Company, New York.

Teachers and school executives have increasing need for an understanding of, and skill in, using simple statistical computations. The present book is frankly a workbook in which teachers may learn the principles and methods by actually working out typical problems.

The Principles of Agronomy

By Franklin S. Harris and George Stewart. Cloth, 588 pages, illustrated. Price, \$2. The Macmillan Company, New York, N. Y.

It is fifteen years since the first edition of this work made its appearance. Since then the progress of research has gone on. A number of noteworthy advances in agronomy have been made. The science of crop production and land management has gone several steps forward.

In view of the progress made in the field of agronomy together with the improvement in teaching methods prompted a revised edition. In fact, the authors state the book has been entirely rewritten. The thirty-odd chapters deal exhaustively with every phase of the subject for students in the high-school level. The production of plants, soil as a resource, timber, food, clothing, and shelter, are discussed as an introductory to the succeeding chapters.

Then follows an analysis of plant environment, structure, and function. The seasons, frost, temperature, water, sunlight, wind, soil, pests, and all the factors that enter into production are dealt with. The science which enters into the rearing of plants and animals is brought to the surface.

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Part IV of the volume treats the subjects of field management, planning the farm, what crops

to grow, farm equipment, and factors of success in crop production.

The appendices deal with laboratory guides, fertility in farm produce, fertilizing, quantity, and depth of planting, rules for measuring hay in the stack, wheat-harvest calendar, and crop statistics.

General Science Workbook

By C. H. Luke, L. E. Welton, and J. C. Adell. Paper, 352 pages. Price, \$1.40. Silver, Burdett & Co., New York.

This book rather interestingly reflects the change in emphasis on the teaching of science from extensive laboratory experiments involving the use of materials and apparatus without extensive application to life, to distinctly limited experiments with a greatly increased amount of observation of common objects and phenomena of everyday life, coupled with study and thoughtful application to the students' own environment. The book offers more than a hundred problems in sixteen major units of science study, ranging from physics and chemistry to nutrition and bacteriology. The problems are simple enough for the junior-high-school level, but in many instances, sufficiently difficult to challenge even bright pupils. There is a delightful adherence to the principle that novices in science should begin with the plain observations of phenomena and should be led to draw conclusions which are unquestioned and within their range of understanding. The book thus avoids the fault so common in many texts, of giving immature children fixed notions on distinctly debatable theories and hypotheses, and of creating distinctly unscientific attitudes.

Boys and Girls at School

By Margaret L. White and Alice Hawthorn. Cloth, 56 pages. Published by the American Book Company, New York.

This is a "first primer" in the *Do and Learn Readers Series*, and is delightfully constructed on the principle that children should be led to read the printed word through the reading of pictures. Play, pets, kindergarten activities, and home life form the subject matter. Considering the amount of illustrations and the brevity and repetitive form of the text, the vocabulary is astonishingly large.

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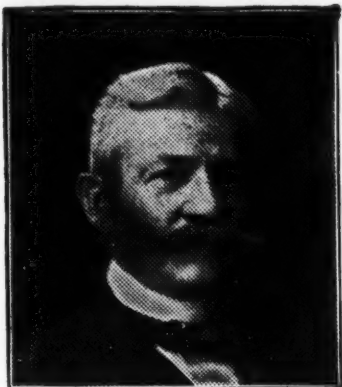
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By Margaret L. White and Alice Hawthorn. Cloth, 132 pages, illustrated. Published by the American Book Company, New York.

This primer follows closely the plan of organization of the "first primer" of the *Do and Learn Readers Series*. The text and illustrations strongly emphasize child interests as found in play, pets, home activities, and school study. The plan of centering the stories around Mary Alice and Willard, and their delightful companions and pets gives the book a continuity not found in the average primer. The amount of reading material and the vocabulary of nearly two hundred words reflect interestingly the increasing amount of reading which is possible under right conditions in the first grade.

### How the World is Clothed

Frank G. Carpenter. Cloth, 352 pages, illustrated. Price, 96 cents. American Book Company, New York, N. Y.

Here is a splendid companion book to Carpenter's books entitled *How the World is Fed*, and *How the World is Housed*.

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By Clarence A. Rubado. Cloth, 108 pages. Price, \$1.50. Bureau of Publications, Teachers College,

Columbia University, New York.

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### Third Latin Book

By Ullman, Henry, and White. Cloth. 527 pages. Price, \$2.20. The Macmillan Company, New York.

Comprehensiveness is the main feature of this lengthy volume, divided into four parts for teachers' convenience in selecting suitable class material. Part one contains a review of second-year work on Cæsar and may well be omitted or hastily skimmed over. Part two contains appropriate and interesting selections from Pliny, Gellius, Petronius, and Seneca. Pliny's inclusions will undoubtedly provoke keen enthusiasm due to their intriguing titles—"Drop Me a Line," "Friends and Favors," "Spring Poems and Very Human Romans," "Happy Birthday," and "Thanks." Gellius' "Television" is a proof that some modern inventions aren't really new after all; while Seneca's "Words of Wisdom," advocating intensive rather than extensive reading, is still good advice. Cicero's "Joke Book," also included here, will make the Latin hour too short for eager pupils.

Cicero and Sallust comprise the third division. Such well-known selections as Cicero's "Against Catiline," "For Archias," "For Pompey," "Against Antony," and "Letters" are included, as well as Sallust's notable "Conspiracy of Catiline." The authors devote more than one half of the entire book to Cicero's work, since that is the usual third-year study. The fourth division, containing Ovid's *Metamorphoses*, shows excellent care in selecting "Daedalus and Icarus," "Phaethon," "Pyramus and Thisbe," "Niobe," and "Atalanta" for inclusion.

This book is valuable both to the teacher and student; to the first, because of its supplementary exercises and grammar summary, to the second, because of the collateral reading lists, simple footnotes, and vocabulary. A concise life of each author precedes his work and serves as an introduction to it.

### Science in the Service of Health

By Elliot R. Downing. Cloth, 320 pages, illustrated. Price, \$2. Longmans, Green and Co., New York, N. Y.

This text approaches the study of science and of health from the appreciation point of view. In the study of each phase of the subject it reveals the evolution of the science through the history of the terrible plagues and the consequent contributions of the great men to the study of the disease. The new approach not only makes the study fascinating but induces the junior-high-school student for whom it is intended, to read the life history of the men the book touches.

### Statistics for Teachers

By Ernest W. Tiegs, Ph.D., and Claude C. Crawford, Ph.D. Cloth bound, 212 pages. Published by Houghton, Mifflin Company, Boston, Mass.

The introduction to this volume is written by the distinguished educator, Edward P. Cubberley, in which he notes the importance of the application of the statistical method to the study of educational problems. He holds that "we attempt to determine principles of action involved" and thus "test their validity by statistical treatment."

The authors recognize the importance of statistics and their use not only by the research expert, but by the average teacher as well. They contend, and properly so, that a teacher must study statistics "because without it he cannot get very far in education, or even be a highly successful teacher in this generation."

Statistical training, it is admitted, is a protection against false and erroneous conclusions. Therefore a knowledge of statistics, reliable and correct, is useful to both the teacher and the administrator. A grasp of statistical procedures becomes essential in determining the purely experimental and speculative as against the records of data and fact.

The manner of tabulating data, arriving at the mean and median and the percentile and variability, is well conceived. There are also chapters on the normal curve, reliability, and correlation. A list of selected references is provided.

**The Training and Work of High-School Teachers in Wisconsin in New Positions.** By O. H. Plenzke and Edgar G. Doudna. Published by the Wisconsin State Department of Public Instruction, Madison, Wis. This study indicates that 24 per cent of the teachers in Wisconsin high schools in 1929-30 were new in their positions and that more than 53 per cent were shifting from one job to another.



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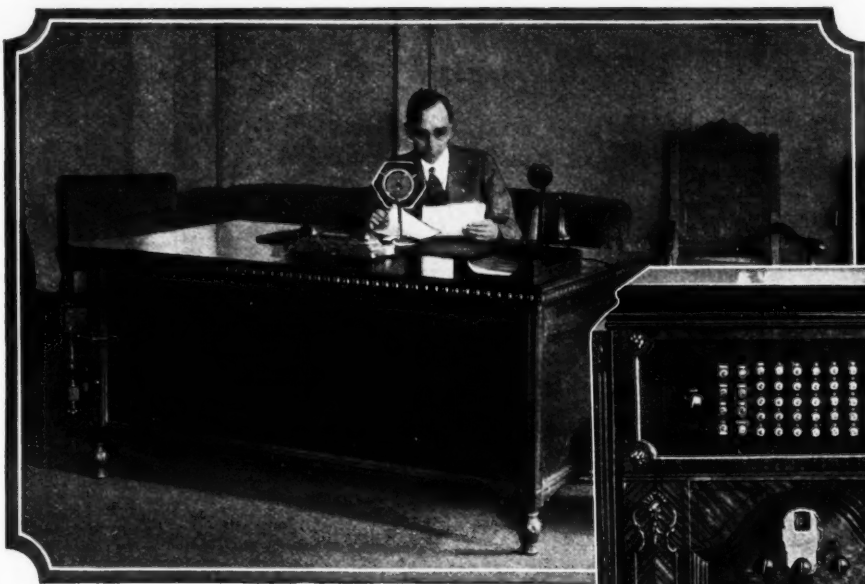
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## SCHOOL ADMINISTRATION NOTES

### SURVEY OF SECONDARY SCHOOLS

A study to be made of the administration and supervision of secondary education in this country is announced by the United States Office of Education. Dr. Fred Engelhardt, of the University of Minnesota, is directing the survey.

The investigation will involve twelve major subjects of inquiry which the office lists as follows:

1. Brief historical statement in order to relate the development of the organization for the administration of secondary education in public schools to the background and origin of the underlying philosophies and practices.

2. Analysis of forces such as school law, regulations, personnel factors, and the like which have become determinants and controls of the existing types of organizations.

#### Board of Education Place

3. The direct responsibility assumed by the State departments and accrediting bodies which have made staff members of these officers' functioning officials in the administration and supervision of local secondary schools.

4. Place assumed by boards of education and their executives in the various types of organizations planned for the management of local secondary units.

5. The responsibilities assigned to and assumed by the central office of local school systems and the various types of central office organization developed to carry on the work in secondary schools.

6. Evaluation of the various plans in operation for the administration of the various types of secondary schools within school systems.

7. Evaluation of the various organization plans operating within various types of schools for administration and supervision.

8. The place delegated the principal in the administration and supervision of secondary schools in various types of local school systems.

9. Analysis of the status of the personnel employed in the various staff positions having to do with secondary schools.

10. Study of the functions assigned and the duties and responsibilities allocated to the various members of the administrative and supervisory staff employed in the secondary schools.

11. The organization within secondary schools to facilitate efficient management, and to relieve professional staff members of unnecessary clerical work and routine duties.

12. The organization within schools and systems to coordinate effort, to reduce unnecessary duplication, and to develop cooperation.

### OVER-AGE PUPILS DECREASE IN NORTH CAROLINA

The state education department of North Carolina, in a recent statement, shows that there has been a tendency toward a decrease in over-age pupils in the state. The average chronological age of the 595,747 children enrolled during 1928-29, whose ages ranged from 5 to 21 years, was 10.79 years. Two years previously, the average chronological age of the pupils in white schools was 10.82 years. There appeared to be very little difference between the average age of pupils for the two years.

The average "standard" age, the age which these pupils ought to have according to grade location,

### THE CHILD'S LEISURE

"There are two important things to be considered in planning leisure. One is a certain amount of time for a child to do the things that interest him deeply and for which he can plan himself, or do spontaneously what seems good to him. The other is, that some time should go to stimulating and deepening spiritual values."—Ethel H. Bliss.

is 9.86 years, whereas two years ago in 1926-27, this age was 9.77 years. In 1926-27, according to the state department's statement, the average over-ageness for white children of the state was 1.05 years, in 1927-28 it was 1.01 years, and in 1928-29 it was .93 of a year. This was attributed largely to the improved placement of pupils according to their ages in the respective grades.

The study revealed considerable difference between the standard age of rural and city pupils, the latter group being nearly three fourths of a year farther advanced. The average chronological age of the two groups is approximately identical. As a result, the amount of over-ageness of city school children is smaller than that of rural children. Rural pupils, it was found, are 1.09 years over age for their grade, while in city schools the average over-ageness is only .45 of a year.

### BALTIMORE'S SCHOOL BUSINESS DEPARTMENT

At a recent meeting of the board of education of Baltimore, Maryland, the title of the director of business management was changed to assistant superintendent. The business department is organized upon the principle that its purpose is to serve educational needs and the measure of its success is the degree to which it enables the educational divisions to function efficiently. It includes two main divisions, (1) supplies, equipment, and accounting, (2) maintenance and operation of buildings.

The larger part, that is from 75 to 90 per cent, of all supplies and equipment is purchased by contract after formal advertising. The schools make annual requisitions for books, supplies, and equipment, which requisitions serve as a basis for advertised contracts. In order to handle these requisitions with the staff available, the various annual requisitions are made by the schools at intervals from January to April and deliveries are made from March until the opening of schools in September.

When items are bought in larger quantities, the department has tried wherever possible to buy on

(Continued on Page 98)



# "OLD FAITHFUL" PRODUCTS HAVE RECEIVED HIGHEST AWARDS AT THE GREAT INTERNATIONAL CONVENTIONS



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1915



SAN DIEGO  
1915



RIO DE JANEIRO  
1922  
OBVERSE



CHICAGO  
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OTHER KINDRED  
MATERIALS



ST. LOUIS  
1904



PARIS · FRANCE  
1900

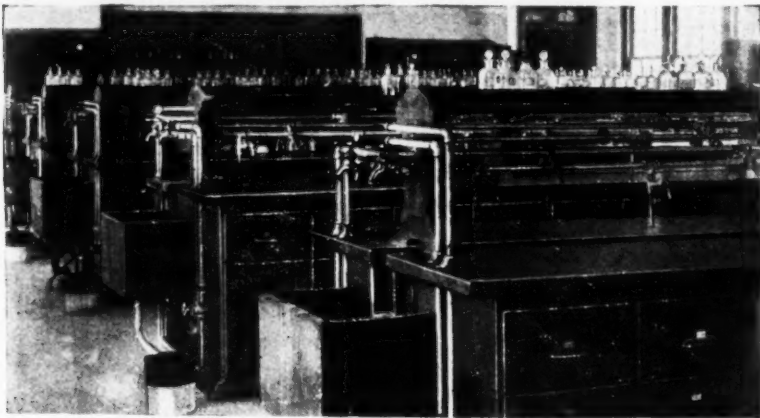


RIO DE JANEIRO  
1922  
REVERSE

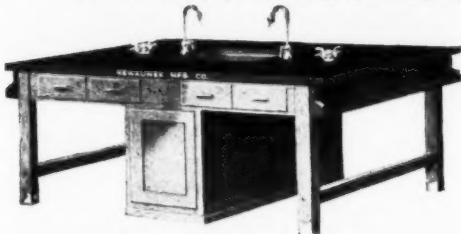


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Combination Science Table No. D-580



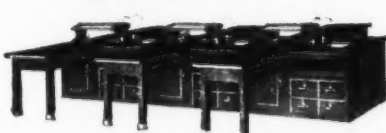
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(Continued from Page 96)

the basis of open specifications rather than by trade names. Each year is marked by an increased number of items bought in this way. Savings of from 10 to 75 per cent have been effected in the price of those items which have been bought on detailed specifications as opposed to buying the same items by trade names.

When samples are asked to accompany bids, the samples are carefully tested to ascertain if they meet the requirements of the specifications, and the award is made to the low bidder meeting the specifications. Deliveries are compared with the samples submitted and any items falling short in quality are rejected. On many items chemical analysis and perhaps other technical testing are required, in which case the assistance of the city bureau of standards is secured.

#### A NEW TIME BOOK

The New York City board of education has recently adopted a regulation requiring all principals, assistants, teachers, and other members of the teaching and supervisory staffs, substitute teachers in training, clerks, and others to record their "time" upon entering and leaving school. The time record under the regulation must show the absence and lateness of all members of the school staff and every absence from the school premises during the school hours with duration of such absence and the reason therefor. The entries must be made by each teacher and other employee personally, and must be preserved by the head of the school for inspection by the superintendent, the auditor, and other school executives.

The principals are not permitted to use private memorandum books or other entry sheets or cards. The entries are to be made in ink. The book provided by the board of education is illustrated substantially in the accompanying cut. At the close of each month the teacher is expected to append her signature, addresses, and telephone number.

The form provides space on each page for five full weeks, but it is expected that only a single school month will be entered upon a single page. If a school month begins upon a day other than Monday, the record is begun on the respective

day and date. Substitutes can make use of the book during an entire month, entering their time and certifying to their service in the same manner as regular teachers. Substitutes who are employed for only a few days enter their time in the space corresponding to each date of service and sign their names daily in such space.

The columns for "deductions from compensation" must be in agreement with the corresponding column of the monthly payroll prepared by the principal.

#### SCHOOL ADMINISTRATION

♦ Lowell E. Jepson, the new president of the Minneapolis board of education, holds that the board is properly a legislative body, and that purely educational matters should be left to the superintendent. In comment upon Mr. Jepson's position, the *Minneapolis Star* says: "If the board

will follow Mr. Jepson's advice it will have made a long step toward efficient management of the schools.

"For a board of laymen to employ a man as an expert in his profession and then attempt to dictate to him as to how he shall conduct technical affairs is ridiculous, but the school board is not the only municipal body that has done just that thing in years past. If the expert employee doesn't get results the only reasonable course is to replace him with someone who will."

♦ Sioux City, Iowa. Under the policy in operation in the city schools, new books are very seldom adopted for the school system as a whole. It is the purpose of the administrative department to adopt new books in such a way that they have a gradual entry into the schools and in that way do not displace a number of good unworn books

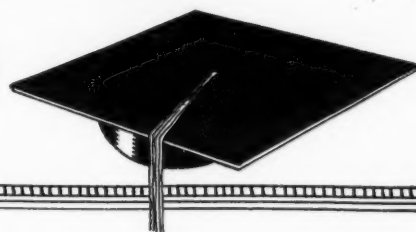
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| TIME BOOK                                   |      |                   |                |                            |            |                   |                |                            |            |          |  |
|---------------------------------------------|------|-------------------|----------------|----------------------------|------------|-------------------|----------------|----------------------------|------------|----------|--|
| School                                      |      | Borough           |                |                            |            | Month             |                |                            |            | Year 193 |  |
| Name                                        |      |                   |                |                            |            |                   |                |                            |            |          |  |
| Time Schedule                               |      |                   |                |                            |            |                   |                |                            |            |          |  |
| For Subs. Only Kind of License & Serial No. |      |                   |                |                            |            |                   |                |                            |            |          |  |
|                                             |      | Daily Time Record |                | Deducted From Compensation |            | Daily Time Record |                | Deducted From Compensation |            |          |  |
| Day                                         | Date | Arrival H.M.      | Departure H.M. | Time Cause                 | Time Cause | Arrival H.M.      | Departure H.M. | Time Cause                 | Time Cause |          |  |
| Mon.                                        |      |                   |                |                            |            |                   |                |                            |            |          |  |
| Tue.                                        |      |                   |                |                            |            |                   |                |                            |            |          |  |
| Wed.                                        |      |                   |                |                            |            |                   |                |                            |            |          |  |
| Fri.                                        |      |                   |                |                            |            |                   |                |                            |            |          |  |
| Signature                                   |      |                   |                |                            |            |                   |                |                            |            |          |  |
| Address                                     |      |                   |                |                            |            |                   |                |                            |            |          |  |
| Telephone Number                            |      |                   |                |                            |            |                   |                |                            |            |          |  |

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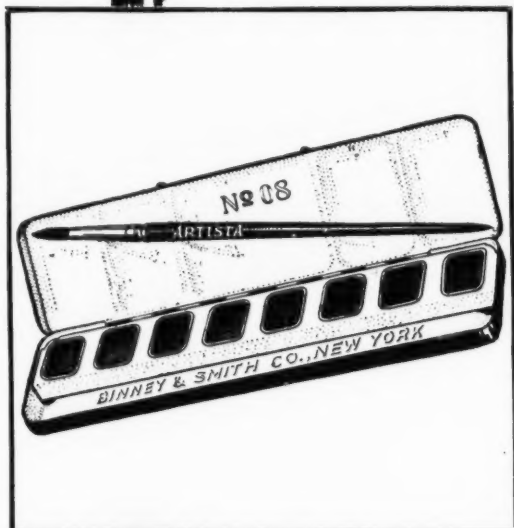
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(Concluded from Page 98)

which precede them. In the grades, this is done by introducing new books usually a half grade at a time. In the junior and senior high schools, it is done by transferring old books from one building to the other buildings, and introducing the new books into the one school from which the transfer is made. In this way the introduction of the new books does not become an additional burden to the district. The new books are usually purchased in about the same number as the old books that would have been purchased.

♦ Supt. C. R. Reed, of Minneapolis, Minn., has asked the appointment of a fourth assistant superintendent of schools, to have charge of records and services at present under the direct supervision of the superintendent. The new official would have charge of the school census, attendance, social welfare, visiting teachers, child guidance, special classes, and clerical service.

♦ Memphis, Tenn. A continuous record system has been introduced in the schools as a step toward increased efficiency in the school system. Under the plan, records will be kept of the students' work from the time they enter the elementary schools until they graduate or withdraw. The record will contain the pupil's marks, the schools attended, the deportment, and the results of special tests.

♦ Beaver Dam, Wis. A one-piece gymnasium suit in green has been adopted as a standard uniform for high-school girls.

♦ The research division of the Ohio state education department has compiled figures showing that the enrollment for the school year 1929-30 was 1,249,612. It is anticipated that the enrollment for the school year 1930-31 will be a hundred-thousand increase over that of last year, making an enrollment of approximately 1,350,000. The increase is attributed to three reasons, namely, the strict observance of the attendance laws, more attention to the interests and abilities of students, and the normal increase in population. The enrollment for the first grade was estimated at 150,000. Last year the state enrolled 146,316 pupils.

The enrollment in the high school last year was 333,697 students and the anticipated enrollment for

1930-31 is 350,000. The increased enrollment is due to the demand for high-school education, the high schools being more attractive and appealing to the students, and to the attendance laws requiring a pupil to attend school until he reaches the age of 18.

♦ The administrative department of the city schools of Connorsville, Ind., has adopted a new policy, providing for a continuous reporting plan, with reports of tests and other work of a research character. Under the plan, information of help to teachers, supervisors, and other school officials is collected and issued as special bulletins to those interested. The annual report of the superintendent is the most extended of these bulletins and contains such material as discussions of school attendance, analyses of marking systems, discussions of the program of study and recitations, reports on standard tests in the grades and high school, and analyses of the six weeks and yearly reports.

♦ Tarrant City, Ala. The city recently joined other municipalities of Alabama of her class as a separate school unit, by assuming direct charge of the school system. The Federal census showed the city to have over 6,000 population.

♦ The public and parochial schools of New York City began the fall opening of the schools with an attendance exceeding the million mark. Over 1,079,000 entered the public schools and about 200,000 the parochial schools. The high schools broke all registration records, the advance enrollment being 180,018, a gain of 10,640 over last year. The board of education opened three new high schools with 12,144 sittings, one in Brooklyn, one in Queens, and the third in the Bronx.

♦ Lake Forest, Ill. The Richardson plan of organization and instruction has been adopted at Lake Forest Academy. The plan provides for two 45-minute periods, the first for recitation, and the second for supervised study. Every fifth appointment period will be devoted to review and research. Students will prepare written reports on their work.

The plan calls for a daily staggered rotating schedule, with a library in the general study hall for reference purposes. The combined study and recitation period makes possible close and logical

coördination between class study. Teachers and students are brought into close contact and the method of work more closely approaches the college seminar.

♦ The public schools of Canton, Ohio, opened the fall term with a total enrollment of 20,404 pupils, or an increase of 313 over last year. The high school reported 3,066 students, or an increase of 368 over last year.

♦ The schools of Dayton, Ohio, opened with an enrollment of 33,263, or an increase of 6,043 pupils over last year. Of the total, 5,500 pupils are in schools annexed during the summer. The gain in the city area was only 543 over last year.

♦ The schools of Lima, Ohio, opened with 7,077 pupils in seventeen schools, which was an increase of 346 over last year. The elementary schools enrolled 4,165 pupils, with an increase of 600 pupils. Central High School led the high schools, with an enrollment of 1,695, as compared with 1,682 in 1929. South High School was second, with 1,217 students, or an increase of 38 over the last year.

♦ Nearly 1,500,000 library books were used by the pupils in the 385 standard elementary schools of North Carolina during the year 1929-30, according to statistics compiled by the state education department. In these elementary schools, there are now over 330,000 volumes of library books, with more than 143,000 of the number in the rural schools. Nearly 800,000 volumes were loaned to pupils during the year.

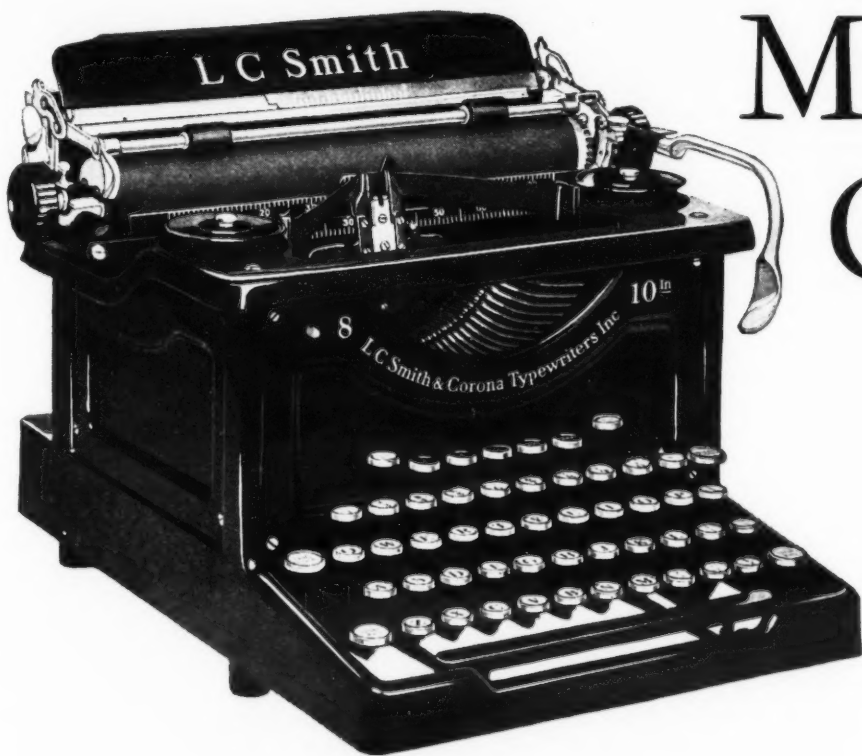
In the elementary schools of the state, there are 188,000 library books, with a total of 64,645 borrowers, and 687,930 volumes loaned during the year.

During the year 1928-29, there were more than 1,150,000 library books in all the elementary and high schools of the state, whereas two years previously, in 1926-27, there were 883,725 available library books.

♦ The federal district court at Yazoo City, Miss., has recently issued a temporary injunction, restraining the state superintendent and county superintendents of Mississippi from using the newly adopted textbooks in the schools. The order is effective until the litigation over the textbooks has been settled by the courts.



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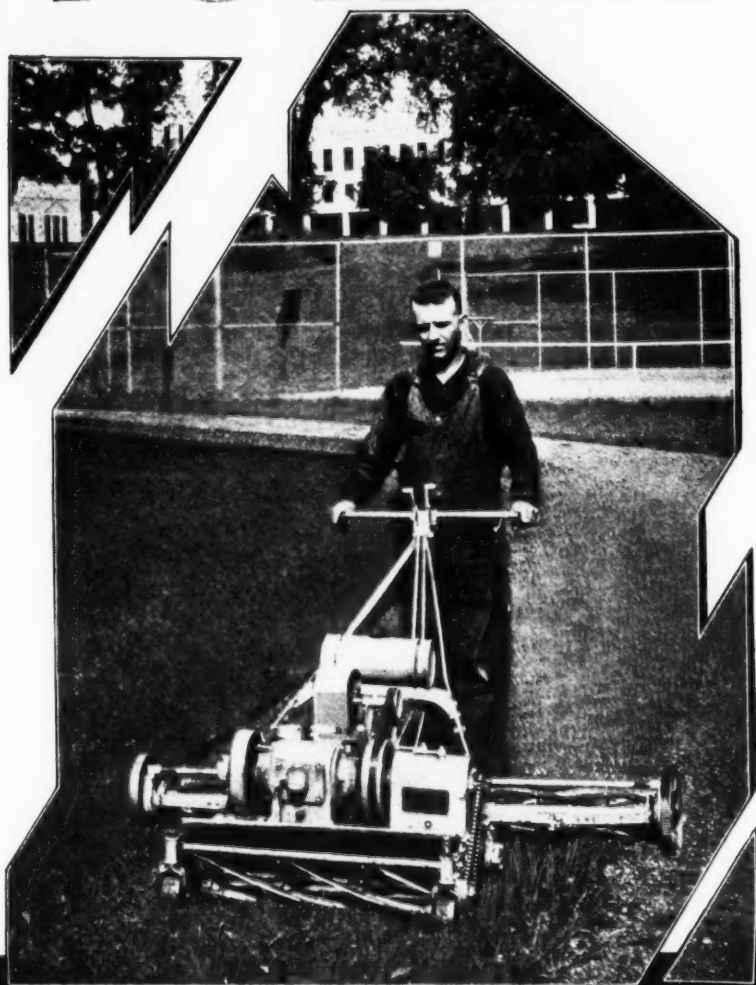
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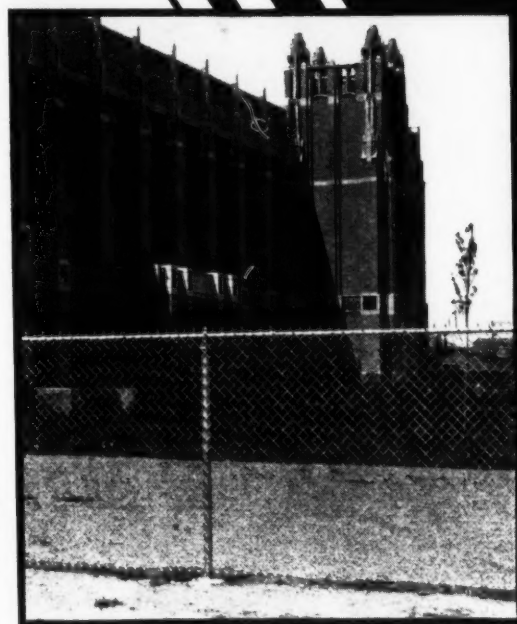
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*exclusive*  
*with Page.*

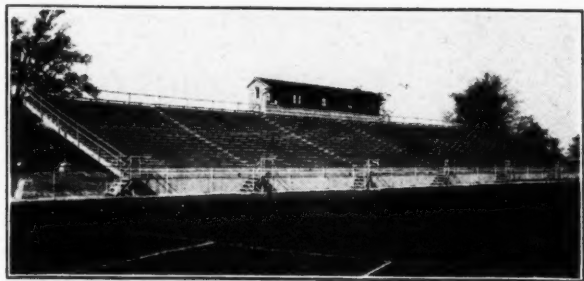
*Page Fence is a*  
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# PITTSBURGH

## DES MOINES



This modern steel PDM Grandstand holds 2880 spectators—comfortably and profitably. It is the second PDM all-steel unit installed for Miami University, Oxford, Ohio.

## King Football Is Here!

Football pays the way for the entire year's athletic activities in most schools and universities. Is it paying the way for *YOUR* school? Do you have adequate seating facilities on your field to reap this financial reward—and enjoy a record season financially?

The Pittsburgh-Des Moines Steel Grandstand offers

maximum seating capacity at minimum cost. Its upkeep is low—an occasional painting; its investment value is high. Our special deferred payment plan allows PDM Grandstands to literally earn their own cost from the increased receipts which they produce.

*PDM Grandstands are built in standard sections, which can be added to or double decked as required. The clear space beneath the stand may serve as offices or storage and dressing rooms. Comfortable wooden seats raised on steel supports give ample leg and foot room.*

[Further information on our all-steel grandstands is given in our free Folder No. 87]

### Pittsburgh-Des Moines Steel Company

3489 Neville Island, Pittsburgh, Pa.

991 Tuttle St., Des Moines, Ia.

693 Hudson Terminal Bldg., New York, N. Y.

## TEACHERS' SALARIES

### NEW ROCHESTER SALARY SCHEDULE

The school system of Rochester, Minn., has since September 2, operated under a new salary schedule, which provides minimum salaries for teachers in elementary grades, subnormal and deaf classes, with annual increments up to a definite maximum salary.

Under the schedule, teachers in the kindergarten and elementary grades one to six will receive a minimum salary of 1,035 per annum. Only applicants who are graduates of a teachers' college offering training beyond the high school are eligible for appointment in the grades. Teachers in the group, \$1,035-\$1,305, who are rated good, will receive annual increments of \$45, up to the maximum, and teachers rated excellent will receive increments of \$63, up to the maximum. Teachers in the group, \$1,305 maximum, who are rated good, will receive increments of \$36, up to the maximum of \$1,575, and teachers rated excellent, will receive increments of \$45, up to a maximum of \$1,620.

Teachers in the subnormal department will receive a minimum salary of \$1,125. Teachers in the group \$1,170-\$1,395, who are rated good, will receive increments of \$45, up to the maximum, and teachers rated excellent, will receive increments of \$63, up to the maximum. Teachers in the group \$1,395 maximum, who are rated good, will receive increments of \$36, up to the maximum of \$1,665, and teachers rated excellent, will receive increments of \$45, up to the maximum of \$1,665.

Teachers in deaf classes will receive a minimum salary of \$1,260. Teachers in the group \$1,260-\$1,440, who are rated good, will receive increments of \$45, up to the maximum, and teachers rated excellent, will receive increments of \$63, up to the maximum of \$1,440. Teachers in the group \$1,440 maximum, who are rated good, will receive increments of \$36, up to the maximum of \$1,710, and teachers rated excellent, will receive increments of \$45, up to the maximum.

High-school teachers, grades seven to twelve, will receive a minimum salary of \$1,305. Teachers in the group, \$1,305-\$1,485, who are rated good, will receive increments of \$45, up to a maximum of \$1,485, and teachers rated excellent, increments of \$63, up to the maximum. Teachers in the group, \$1,485 maximum, who are rated good, will receive increments of \$36, up to a maximum of \$1,755, and teachers rated excellent, will receive increments of \$45, up to a maximum of \$1,800.

Teachers in the junior college will receive annual increments of \$50, up to a maximum of \$2,400. Married men will receive a maximum of \$2,700.

Single men in academic positions are allowed a maximum of \$2,000, and married men a maximum of \$2,400. Heads of departments in the high school will receive \$50 above the schedule after being assigned definitely to such positions.

Principals of elementary schools having 6 teachers or less will receive additional salary in the amount of \$75; principals of buildings with more than 6 and less than 10 teachers, will receive additional salary in the amount of \$100, and principals having more than 10 teachers will receive a like amount.

Additional compensation amounting to \$25 will be paid to any teacher who attends a summer school approved by the superintendent. A limit of \$100 has been set as the amount which any teacher may receive as extra compensation for summer-school work.

### TEACHERS' SALARIES

♦ New York, N. Y. Deductions from teachers' pay due to salary shrinkages, accruals, and unexcused absences of teachers, will help the city meet the increased cost for the maintenance of the school system, according to estimates made public.

For the current year these items totaled \$5,645,853, and during the next fiscal year, they are expected to increase to \$6,017,104. These will result in substantial savings to the city, and the total has been deducted from the \$126,637,496 general school fund. The total school budget for 1931 will amount to more than \$147,000,000, instead of its present total of \$141,000,000.

The largest savings are expected to result from normal salary shrinkages, due to anticipated cessations of service of teachers receiving salaries higher than the rates of their successors. Leaves of absence without pay and disapprovals of service will also effect savings.

♦ Providence, R. I. A new salary schedule recently adopted by the school board sets no maximum limit, so that increases stop only with incompetence, death, or retirement.

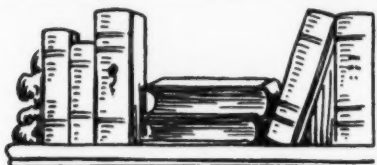
The new system, had been planned to provide continued stimulus to achievement for every teacher from the kindergarten instructor to the principal. Under the plan special merit is financially rewarded, but incompetence is penalized. With a year's notice, the superintendent may withhold a salary increase from an unsatisfactory teacher. On the other hand, he may within limits, advance on the schedule, teachers whose outstanding service appears to merit special reward.

Between the two extremes are a large group of teachers who will be encouraged to maintain their professional efficiency so as to advance by regular degrees according to years of service. Teachers are paid under three schedules, elementary, junior high, and senior high schools, and principals, supervisors, and special officers.

The new plan, according to Supt. A. J. Stoddard, has been successful in solving a difficult question of salaries and will have a tendency to give teachers a feeling of satisfaction and increased professional interest, which will result in a higher degree of efficiency in service.

♦ New York, N. Y. Part time has been reduced to a new low level, according to figures recently issued by the school administrative department. There were 48,949 children on part time in the city's 1,000 schools, which was 21,905 less than a year ago, and 13,174 less than June last. The radical reduction in part time, in the face of a registration rise of 18,000 pupils, has been attributed to the large building program carried out by the school board.

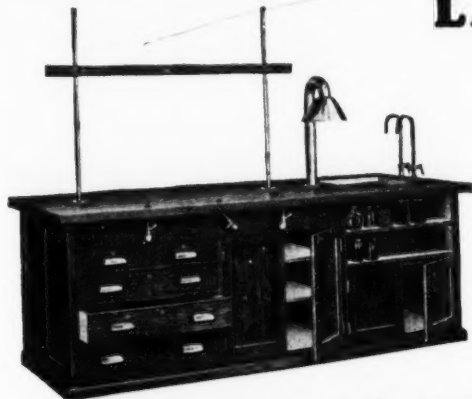
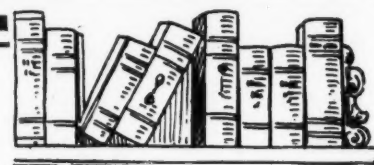
The registration showed a total of 1,078,468 pupils, of whom 784,234 were in the elementary schools, and 182,922 in the high schools.



## PETERSON FURNITURE

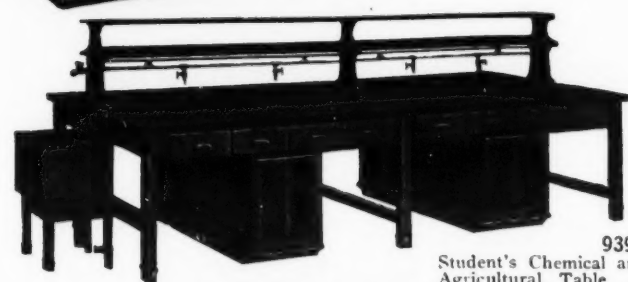
for

## LABORATORY and LIBRARY



1205

A dual-purpose table serving both Physics and Chemistry instruction. Ample drawer and cupboard space. Two compartments in rear for tubing, etc.



939

Student's Chemical and Agricultural Table. A dual-purpose laboratory table. Arranged to accommodate sixteen students. Open space below provides knee room when seats are used.

No matter what your needs you will find in PETERSON FURNITURE a lasting satisfaction guaranteed by over 38 years of quality manufacturing.

Our complete Catalog No. 16-A of Laboratory, Library, Domestic Science and Vocational Equipment will be mailed upon request.



L-5060

Reading Table of improved construction, assuring absolute rigidity. . . . legs equipped with brass sockets.



1135

Student's Biology Table. A double-duty Laboratory and recitation table used where it is preferable to have the students face one way.



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Manufacturers of Guaranteed Laboratory and Library Furniture.

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## NEW RULES & REGULATIONS

### SCHOOL-BOARD RULES ON SOLICITATIONS

The Los Angeles board of education has amended its rules and regulations dealing with commercial advertising and soliciting in the schools which now read as follows:

"The following activities on school premises are forbidden (with the understanding that "school premises" includes all land to the center of the boundary streets), to wit:

"(a) Reading or announcing or posting advertisements, or distributing advertising materials.

"(b) Permitting any agent, publisher's representative or other person to exhibit or sell to pupils or teachers any article whatever, or to solicit for any cause whatever or to announce any public entertainment.

"(c) Taking of photographs, except as indicated herein:

"(1) *Elementary schools.* Pictures may not be taken in elementary schools;

"(2) *Junior high schools.* Principals may arrange with a photographer for the taking on school premises of group pictures of students and faculty members and pictures of officers of organizations, but not for individual pictures, and may arrange for the sale of these group pictures to students, but students may not be solicited to buy; and

"(3) *Senior high schools.* Principals may arrange with a photographer for the taking on school premises of group pictures of students and faculty members, pictures of school organizations, and also of individuals, and may arrange for the sale of these pictures to students, but students may not be solicited to buy; provided, however, that none of said pictures shall be taken unless needed for the school's publications or for other school activity.

"(d) Taking up of any contribution.

"(e) Selling of tickets for any outside activity; provided, that nothing in the foregoing shall prevent the board from sanctioning any worthy enterprise on school premises, particularly enterprises

of an educational or charitable nature, said sanction being evidenced by written permission from the office of the superintendent of schools or from the secretary of the board."

### RULES AND REGULATIONS

♦ The New York City board of education has adopted the following new rule: "Absence, not exceeding five days in any one school year, for the observance of religious holidays, will not be regarded as absence from duty, but as nonattendance. For such nonattendance, there will be deducted from each nonattendant an amount equal to the pay of a substitute for each school day of such nonattendance. A teacher who intends to be such nonattendant must give to the principal of the school at least two days' notice, in writing, of such proposed nonattendance. The principal of the school will forward such notice attached to the payroll to the auditor of the board of education."

♦ The school board of Tiffin, Ohio, has decreed, on recommendation of Supt. C. A. Krout, that hereafter new schoolhouses shall be named after local civic leaders. Thus, the new \$135,000 structure on the old Minerva site, will be known as the Warren P. Noble school, named after a prominent citizen who served for twenty years as a member of the school board.

♦ Lake Geneva, Wis. The school board has adopted rules and regulations governing the use of the high-school auditorium. The rules read as follows:

"The auditorium is maintained primarily for the use of the schools of the district and the school organizations of the district and must not be rented to, or used by, any person or organization except at such times as may not conflict or interfere with its use by the schools and school organizations or otherwise inconvenience them.

"For lecture or entertainment, play, or exhibition \$35 per evening or afternoon when lights are used, with an extra charge of \$5 per hour or fractional part of an hour that lights are used after 11 p.m.; and where the auditorium is to be used for rehearsing for plays or exhibitions to be later given in the auditorium, a charge of one half the above rates will be made for the rehearsals.

"For use in the daytime without lights and when

no heat is necessary and use is for not more than 3 hours, \$10, and when heat is necessary, \$15.

"No person, officer, or employee of the district and no committee of the board will have the power to vary the conditions and terms of this rule and no change in these regulations shall be made, except by a majority of the board at a regular or special meeting of the board.

"The auditorium must not be rented to or used by transient or traveling companies or individuals, not local, at all for any price, since it is not the purpose of the board to allow the auditorium to compete with local theaters."

♦ The employment of a physician by a board of education bars his wife from serving as a member of that body. This is the substance of a decision handed down by Charles H. Elliott, State Education Commissioner of New Jersey. The question was raised in the case of Mrs. Julia R. Davies, whose husband is the medical inspector of Matawan township, Monmouth county. Superintendent Elliott adds: "To further assure unselfish service there was added the prohibition of direct or indirect interest in contracts or claims against the board. Without this prohibition a woman could aid in securing transportation contracts for her husband, teaching or janitorial positions for her dependent children and personal contracts for service and supplies. Not only might such salaries or remuneration under such contracts be increased because of her membership on the board, but her presence at the meeting with her interest in the contract might act to deter other members from expressing their views upon any inferior services or supplies furnished under contracts in which she was directly or indirectly interested."

♦ East Chicago, Ind. The school board has adopted a policy, calling for a series of examinations for filling clerical positions. The examinations which are held annually provide an eligibility list, from which all appointments to the clerical staff are made. They consist of exacting tests in shorthand and typewriting, and in the essentials of English, spelling, and other subjects. In addition, a personal interview is held with each applicant when her school and community record are given careful attention.





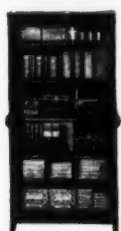
Combination Cabinet

W. D. H.  
36 x 18 x 78"  
36 x 21 x 78"  
36 x 24 x 78"



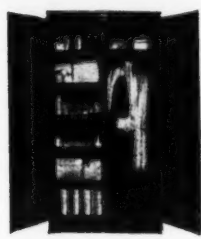
Wardrobe Cabinet

W. D. H.  
36 x 18 x 78"  
36 x 21 x 78"  
36 x 24 x 78"



Stationery Cabinet

W. D. H.  
36 x 12 x 66" or 78"  
36 x 15 x 78"  
36 x 18 x 66" or 78"



Teachers' Cabinet

W. D. H.  
36 x 18 x 78"  
36 x 21 x 78"  
36 x 24 x 78"

"Doorless"  
Cabinet

W. D. H.  
36 x 9 x 66" or 78"  
36 x 12 x 66" or 78"  
36 x 18 x 66" or 78"  
36 x 21 x 78"

Sportsman's  
Cabinet

W. D. H.  
36 x 18 x 78"  
36 x 21 x 78"  
36 x 24 x 78"



Janitor's Cabinet

W. D. H.  
36 x 18 x 78"  
36 x 21 x 78"  
36 x 24 x 78"



Electrotype Cabinet

(With 2" or 3" Plain Drawers)

W. D. H.  
36 x 18 x 66" or 78"  
36 x 21 x 66" or 78"  
36 x 24 x 78"

## DURABILT STEEL CABINETS

THERE are thousands of uses in schools and other places for Durabilt Steel Cabinets.

For secure, dust-proof, fire-retarding, vermin-proof and orderly storage of classroom supplies, stationery, office equipment, tools, instruments, blue prints, drawings, maps, printing cuts, machine and electrical supplies; for wardrobe purposes and innumerable other uses Durabilt Cabinets are an economical necessity.

To save floor and aisle space, the doors on Durabilt Cabinets are full opening and can be swung against the side of cabinet where they are completely out of the way. Cabinets can be had without doors when enclosed protection is not required.

Durabilt Steel Cabinets are unlimited in application. This adaptability is due to the numerous sizes available and combinations of adjustable interior equipment that can be arranged.

A wide range of cabinets and interior equipment is carried in stock for prompt shipment. Write or phone for prices and further information. Our suggestions and quotations will not place you under any obligation.



Tool Storage Cabinet

(With 2" Tool Drawers, 3" Shelf Trays and Shelf Partitions)

W. D. H.  
36 x 18 x 66" or 78"  
36 x 21 x 66" or 78"  
36 x 24 x 78"

*"No better built than Durabilt!"*



Storage Cabinet

(With Shelves and Shelf Partitions)

W. D. H.  
36 x 18 x 66" or 78"  
36 x 21 x 66" or 78"  
36 x 24 x 78"



Key Cabinet

(Capacity 100 to 800 Hooks for Locker Keys. Larger keys reduce capacity.)

W. D. H.  
Small 15 x 4½ x 30"  
Large 24 x 4½ x 30"



Tool Storage Cabinet

(With plain shelves)

W. D. H.  
36 x 12 x 66" or 78"  
36 x 18 x 66" or 78"  
36 x 21 x 66" or 78"  
36 x 24 x 78"

Counter and Desk High  
Cabinets

W. D. H.  
36 x 18 x 42"  
36 x 21 x 42" or 30½"  
36 x 24 x 42" or 30½"



Blue Print, Map and Plan Cabinets

(With 3" Drawers having flap at front and hood at rear)

W. D. H.  
36 x 18 x 42", 66" or 78"  
36 x 21 x 42", 66" or 78"  
36 x 24 x 42" or 78"

Desk High  
Cabinet

W. D. H.  
19½ x 18 x 30½"  
19½ x 21 x 30½"

# DURABILT STEEL LOCKER CO.

400 ARNOLD AVE.,

Sales Offices in all Principal Cities

AURORA, ILL.

## "THE FIREHOSE SOAKED THE BENCHES, BUT---"

Think of it—twenty benches thoroughly soaked with water and remaining in this condition for many days!

In extinguishing a severe fire in the Columbia High School, South Orange, New Jersey, tons of water accumulated in the basement where 20 SHELTON benches were in use. Days later after the water had been pumped out, every bench was found to be in surprisingly good condition. In fact, after a refinishing job, each bench in the lot was again as serviceable as ever. A severe test to ask a bench to pass, but ability to pass a test like this, is proof of the quality construction used in SHELTON benches.



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**E. H. SHELTON AND COMPANY, Muskegon, Michigan**  
*Laboratory Furniture Specialists for Thirty Years*      *Canadian Factory at Sarnia, Ontario*

## PERSONAL NEWS OF SCHOOL OFFICIALS

♦ The school board of Tarrant City, Ala., has organized for the first time this year, with the election of DR. L. W. HUBBARD as chairman, MRS. GABIE G. SAVAGE as vice-chairman, and DR. F. R. DALY, DR. D. H. VEAL, and MR. W. N. PROSCH as members. The members of the board made a careful study of the revenues accruing to the city for school purposes before definite action was taken toward assuming the operation of the schools.

♦ MR. W. F. GRAY has recently been reelected for a tenth consecutive term as president of the school board of Clinton, Ill. MR. C. H. MAY, secretary of the board, is serving his seventh year in the position.

♦ MR. EDWARD BARDSLEY was recently reelected for a ninth term as president of the school board of Waldon, N. Y. Other officers chosen were MR. JOSEPH M. PARK, vice-president; MR. G. R. BARTLETT, clerk; and MR. C. W. KAY, treasurer. MRS. JAMES M. BERNHARD and MR. JOSEPH M. PARK were reelected as trustees for terms of three years each.

♦ At a special election called at Buhl, Minn., because of the failure of William McCabe, John Pasich, and A. J. Erchul to file proper acceptance and oath of office, ANTHONY SARTORI, M. H. MONTGOMERY, and A. J. ERCHUL were elected to fill the vacancies. The board was reorganized, with the election of DR. A. W. SHAW as president, MR. ANTHONY SARTORI as treasurer, and MR. GEORGE BARRETT as secretary.

♦ The school board of Bessemer, Mich., has reorganized, with the reelection of DR. C. E. STEVENS as president. MR. M. A. HAGERMAN has been

elected vice-president, and MR. J. A. KALLANDER secretary.

♦ MR. C. E. WALTON has been elected business manager of the school board at Fremont, Ohio. Mr. Walton retains his former position as clerk of the board.

♦ The school board of Vincennes, Ind., has reorganized, with the election of DR. C. L. BOYD as president, MR. J. L. BAKER as secretary, and MR. J. B. E. LAPLANTE as treasurer. Mr. Baker was reelected as a member for a third consecutive term.

♦ Three former presidents of the Department of Superintendence and well-known school superintendents were recently called by death. MR. CHARLES E. CHADSEY, president of the Department, in 1911-12, died at Urbana, Ill., on April 8. MR. FRANK D. BOYNTON, president in 1928-29, died on June 17 in Long Island, New York. MR. WILLIAM M. DAVIDSON, president in 1910-11, died at Pittsburgh, Pa., on July 27.

♦ MR. T. HOWARD WINTERS, assistant state director of education for Ohio, has been given the degree of doctor of philosophy by Ohio University. Dr. Winters holds an A.B. degree from Ohio Wesleyan University and an M.A. degree from Ohio State University, and has been connected with the state department since 1914. Dr. Winters prepared a thesis entitled, "An Evaluation of Typical Attempts to Equalize Educational Opportunities by State Aid."

♦ DR. IRA N. HOLLIS, former president of Worcester Polytechnic Institute, died at his home in Cambridge, Mass., on August 16, at the age of 74. Dr. Hollis was a graduate of the Naval Academy in the class of 1878 and served as a naval engineer until 1893, when he became a professor at Harvard University. In 1913 he became president of the Worcester institution, from which he retired in 1925.

♦ The New York Principals' Association will inaugurate its formal activities of the new school year, with a testimonial dinner to DR. GEORGE J. RYAN, president of the board of education. The dinner which will be held on October 4, in the Hotel

Pennsylvania, is being tendered to Dr. Ryan in honor of his ninth reelection as president of the board, and in recognition of the growth and expansion of the schools during that time. Among the guests will be Dr. William John Cooper, U. S. Commissioner of Education, and Dr. Frank P. Graves, state commissioner of education.

### PERSONAL NEWS OF SUPERINTENDENTS

♦ RAYMOND J. SORENSON, of Baldwin, has been appointed superintendent of schools for St. Croix county, Wis. He succeeds M. R. Goodell, who resigned.

♦ SUPT. GEORGE E. GANIARD, of Mount Pleasant, Mich., was recently given a life membership in the National Education Association by the teaching staff of the schools.

♦ SUPT. J. W. STOTT, of the Frankfort, Indiana, schools has been honored by the board of education of that city. The new athletic field has been named the Stott Field, in appreciation of the superintendent who has been an enthusiastic advocate of athletic and recreational grounds. The *Frankfort Morning Times* says: "He has built one of the best school systems to be found in any city the size of Frankfort in the State of Indiana."

♦ MR. W. A. PARKER, formerly principal of a grade school at Tarrant City, Ala., has been elected superintendent of the city schools.

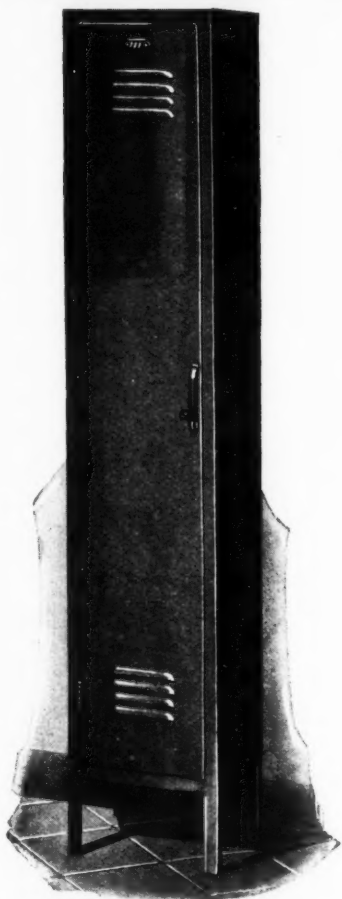
♦ MISS BELLE M. RYAN and MR. L. O. SMITH were recently reelected as assistant superintendents of Omaha, Nebr., for another term.

♦ MR. J. O. LEWIS, formerly principal of the high school at Owensboro, Ky., has assumed his duties as superintendent of schools at Fulton. MR. VEST MYERS, formerly at Fulton, has accepted a position in the editorial department of the Macmillan Company.

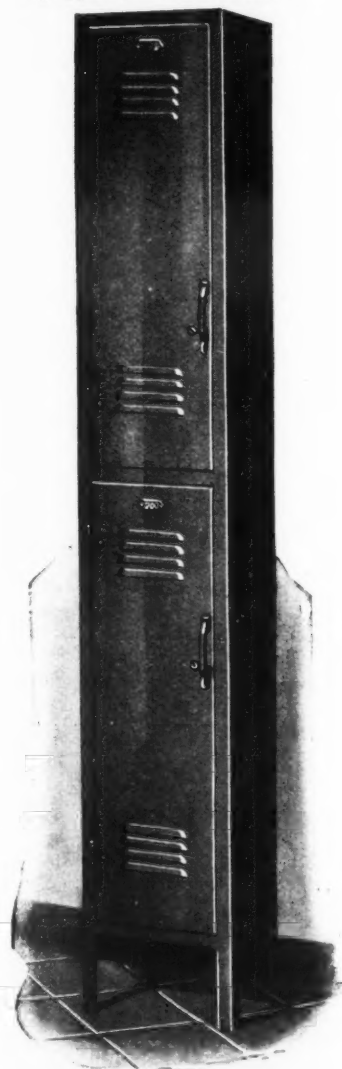
♦ MR. SAMUEL H. MORTON, formerly an instructor in the high school, has been appointed as principal of the high school at Owensboro, to succeed Mr. Lewis.

(Concluded on Page 108)

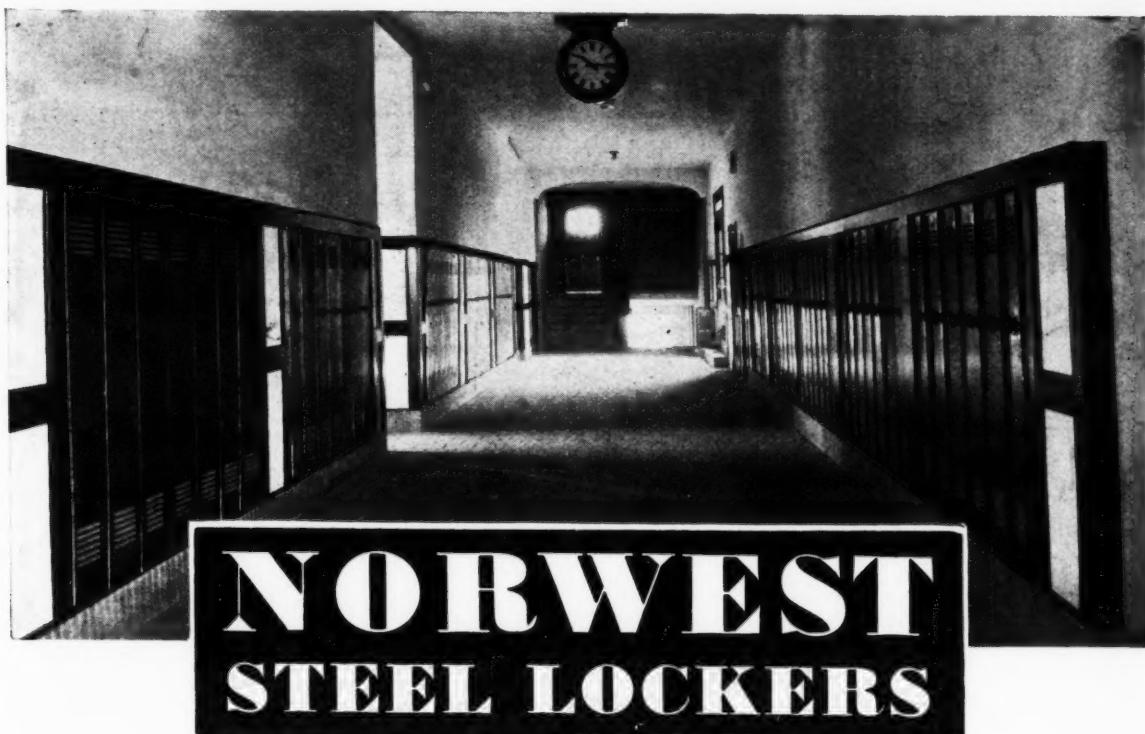




**NORWEST  
SINGLE TIER LOCKER**  
Furnished in two heights—60  
and 72 inches. Room for street  
clothes to hang full length.  
Equipped with hat shelf.



**NORWEST  
DOUBLE TIER LOCKER**  
Assures maximum storage ca-  
pacity in limited floor space.  
Two heights—36 and 42 inches.  
Adequately equipped with coat  
hooks (number depends upon  
depth of locker).



## NORWEST STEEL LOCKERS

### *Minimize Replacements*

Built extra strong at all points where strains are greatest, Norwest Steel Lockers assure many extra years of service at extremely low maintenance cost.

Frames are of heavy steel angles with joints securely rabbeted and electrically welded. Doors are stamped from 16 gauge steel sheets - sturdy, yet flexible enough to spring back into shape in case they are accidentally bent out of alignment. Handles are of malleable iron. Whether banged shut or closed gently, the locking device operates automatically, quietly and positively.

Bolts, nuts and coat hooks are cadmium-plated for maximum protection against rust.

The double-thick lustrous enamel finish is *baked on* to assure lasting beauty and long satisfactory service. All parts are standardized and fully interchangeable.

The Norwest line of Steel Lockers and Shelving includes specially designed equipment for every possible storage purpose. Without cost or obligation to you, Norwest engineers will gladly analyze your requirements, make recommendations as to the most efficient use of floor space, and submit cost estimates.

## NORTHWESTERN STEEL PRODUCTS CO.

4545 West Homer Street, Chicago, Ill.

STEEL LOCKERS

STEEL SHELVING

STORAGE CABINETS

STEEL WASTE BASKETS

Mail coupon for latest catalog showing complete line of Norwest Steel Lockers and Shelving! Also indicate if you wish storage engineer to make survey and submit plans and prices. No expense or obligation incurred.

NORTHWESTERN STEEL PRODUCTS CO.  
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Gentlemen:

Please send catalog on Norwest Steel Lockers and Shelving.  
Have storage engineer call to make free survey and submit prices.

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Title .....

Street .....

State .....

City .....



Student's Chemistry Desk No. 550

**KIMBALL  
CHICAGO**

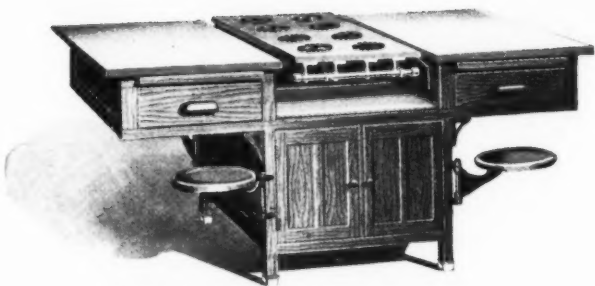


Instructor's Desk No. 660

## W.W. KIMBALL COMPANY

ESTABLISHED 1857

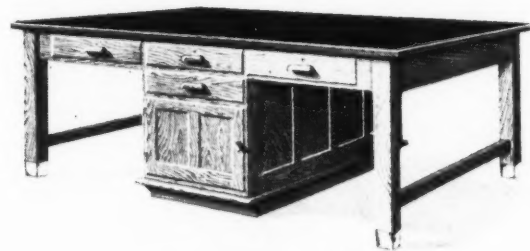
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LABORATORY, VOCATIONAL and LIBRARY  
FURNITURE



Domestic Science Desk No. 2000

A. E. KALTENBRUN  
Director of Sales  
306 So. Wabash Ave.  
CHICAGO

Eastern Distributors  
SUPERIOR SEATING CO.  
105 W. 40th Street  
NEW YORK



Student's Biology Table No. 870

(Concluded from Page 106)

♦ MR. E. R. VAN KLEECK, who was recently re-elected for a third term as superintendent of schools at Walden, N. Y., has been given an increase of \$500 and a bonus of \$300.

♦ MR. RAY GRAHAM, of Viola, Ill., has assumed the superintendency at Mason City, Ill.

♦ SUPT. W. J. HUNT, of Hayfield, Iowa, has been re-elected for a third term.

♦ MR. E. J. JENNINGS, of Middletown, Mich., has been elected superintendent of schools at Quincy.

♦ SUPT. C. B. MUMMART, of Prophetstown, Ill., has been re-elected for the next year.

♦ MR. LEONARD BESTROM, of Grant, Mich., has been elected superintendent of schools at Baroda.

♦ SUPT. J. K. FENNER, of Cranston, R. I., has been re-elected for the next year, with an increase in salary.

♦ SUPT. J. N. CHESTNUT, of Thomson, Ill., has been re-elected for a fourth term.

♦ SUPT. A. R. BRIAR, of Port Byron, Ill., recently received his master of arts degree from the University of Iowa at Iowa City.

♦ SUPT. GILBERT GUSTAFSON, of Milford, Iowa, has entered upon his fifth year of service in the schools.

♦ MR. J. M. MUSTARD, of Lafayette, Ohio, has been elected superintendent of schools at Ridgeway, succeeding J. B. Hartman, who has gone to Versailles.

♦ MR. R. H. BROWN has assumed his duties as superintendent of schools at Virginia, Minn., where he succeeded W. G. Bolcom.

♦ MR. O. M. CHILCOTT, of Jewell City, Kans., has taken over the superintendency at Webber.

♦ MR. M. C. DARNALL, formerly principal of the senior high school at Crawfordsville, Ind., has been elected superintendent of schools, to succeed A. D. Montgomery. MR. L. J. C. FREEMAN was elected principal of the high school, to succeed Mr. Darnall.

♦ SUPT. L. A. WALKER, of Swanton, Ohio, has been re-elected for a term of three years.

♦ SUPT. JULIUS E. WARREN, of Lakewood, Ohio, has been re-elected for a five-year period, after the completion of a three-year term.

♦ MR. F. H. HENNEMAN has been elected a member of the school board of Altoona, Pa., to succeed Mr. H. K. MacFarlane.

♦ MR. CHESTER WELLS and MR. FRED BURTON have been elected as members of the school board of Pocatello, Idaho.

♦ MR. O. B. GRIFFIN has entered upon his duties as superintendent of schools at Litchfield, Conn.

♦ MR. D. O. ROBERTS, of Kings Mountain, Ky., has taken up his new position at Evarts.

♦ MR. C. W. HOWARD has entered upon a year's graduate study at the Stanford Graduate School of Education, Palo Alto, Calif.

♦ SUPT. ALLEN J. BLACK, of Litchfield, Ill., has been re-elected for the next three years, with a substantial increase in salary.

♦ MR. A. R. MORROW, of Madison, Florida, has been re-elected as principal of the Wewahatchka High School in Gulf county.

♦ MR. B. O. SMITH, formerly supervising principal of Tallahassee, Fla., has accepted a position as professor of education in the University of Florida at Gainesville.

♦ MISS ETHEL THOMPSON has been appointed as head of the teacher-training department in the Port Saint Joe High School, in Gulf county, Fla.

♦ MR. HOLLIS P. ALLEN, formerly assistant professor of education at Claremont College, has been elected assistant superintendent of schools at San Bernardino, Calif.

♦ MR. H. N. PETERSON, of Ortonville, Minn., has been elected superintendent of schools at Alexandria, succeeding H. B. Gough.

♦ MR. GEORGE W. GRILL, assistant superintendent of schools at Cleveland, Ohio, recently completed his graduate work for a master of arts degree at Columbia University.

♦ MR. JUDSON JENKINS, of Dawson Springs, Ky., has entered upon his twenty-third consecutive year as head of the school system. He is a graduate of the Southern Normal University and holds the

degree of B.S. and LL.B. He has been superintendent of schools since 1908, and previously was principal of the high school at Princeton, Ky.

♦ MR. ARTHUR VERNER, of Clinton, Ill., has been re-elected for the next year, with an increase in salary.

♦ The appointment of seven men to executive positions in the Cincinnati, Ohio, school system has recently been approved by the school board. The appointments went into effect on September 8, and are part of a plan to centralize the school system. Of the seven appointments, two are new to the schools. They are Dr. E. G. Hesser, director of music, and W. K. Streit, director of education.

Dr. W. A. Justice, formerly a member of the faculty of the University of Cincinnati College of Education, is director of personnel; Mr. Earl T. Gold is director of public relations; Dr. Douglas E. Scates is director of research and statistics; Mr. Charles E. Lex, Jr., formerly purchasing agent for the city of Cincinnati, is head of the division of supplies; and Mr. Robert W. Shafer, formerly clerk-treasurer of the board, is head of the division of finance. Supt. E. D. Roberts is in direct control of all departments under the new plan of centralized control.

♦ MRS. INEZ MONEY has been elected president of the school board of Dublin, Ind. Mr. C. G. LAYMON was elected secretary of the board.

### MR. CASSELL RETIRES AT PHILADELPHIA

Mr. John D. Cassell, for a number of years superintendent of school buildings for the board of education of Philadelphia, Pa., was retired on August 30, having reached the age limit under the Pennsylvania school law.

Mr. Cassell for the past ten years was the director of the board's program for school-building construction and was responsible for the expenditure of \$20,000,000 in the construction of modern school structures. It was largely through his efforts that the city has gained its reputation for an outstanding progressive school-building program.

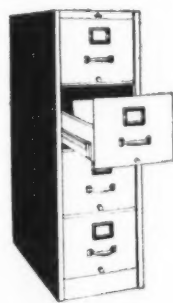
Mr. Irwin T. Catharine, a school architect employed by the board, has succeeded Mr. Cassell as superintendent of buildings.



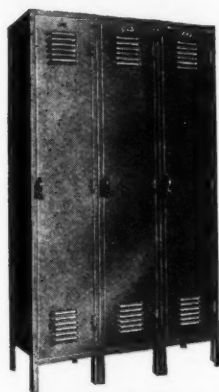
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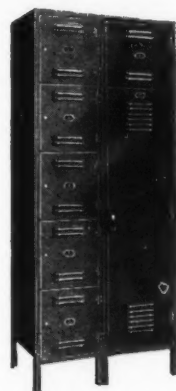
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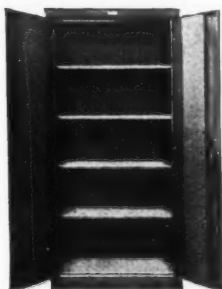
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Storage Cabinets—  
save time and materials



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# Whittier's Successful School Cafeteria

O. H. Barnhill

The John Muir elementary school, at Whittier, California, has one of the most successful school cafeterias in Los Angeles county. It is remarkable for three essential things: wholesome food, popularity with pupils and parents, and a financial profit.

School people from other cities frequently visit this capable cafeteria to learn the secret of its success. Pupils from three other schools, including the high schools near by, eat at the John Muir School. Whittier housewives obtain cooking recipes from the manager of this excellent eating place. The net profits have been used to purchase additional kitchen equipment, playground apparatus, and pictures for the building.

A California law legalizes the use of school money for buying cafeteria equipment. This makes possible the diversion of operating profits into needy channels, although school cafeterias are not supposed to show a profit. On the other hand, they are not supposed to lose any money. There are, however, so many different ways of figuring receipts and expenditures that most school cafeterias have little difficulty in making one equal the other.

Whittier parents are so thoroughly convinced of the value of the school-lunch idea that the parent-teacher association does not need to demonstrate its value, and is glad to leave the management of the school cafeteria with the school authorities. As for the school board, why should it bother with an enterprise so successful and so satisfactory?

## Adequate Help Employed

The reason for the financial success of the John Muir cafeteria, the investigator finds, is not due to skimping on help, serving small portions of cheap food, or charging of high prices. Two full-time and two part-time workers, equal to three regular employees, serve an average of 250 meals per day. Some schools feed nearly twice as many children with the same help, yet operate at little or no profit, despite the large reduction in this overhead item.

Visitors continually express surprise that good food can be sold so cheaply. Three local service clubs, the Rotary, the Kiwanis, and the Lions, were entertained at lunch one day. Meals which would have cost the guests about 65 cents each at a commercial restaurant, were served for an average of 30 cents. The 400 members of the parent-teacher association had a similar experience when they enjoyed their annual luncheon.

The quality and quantity of the food served leaves little to be desired. True, pupils sometimes ask for rich, unwholesome articles, such as pie, doughnuts, and hot dogs, but the great majority are well satisfied with the cafeteria's offerings. The best evidence of the pupil satisfaction is found in the 75 high-school students who leave their classmates and their own cafeteria, with its rich food, and walk a block every day in order to eat at the John Muir School.

## Efficient Management

Entering the building, the visitor finds the surroundings not unusually attractive. The dining room is a low-ceilinged, concrete-floored basement apartment, furnished with plain wooden tables and chairs. Ordinary dishes and silverware complete the equipment used by the youthful patrons. Neither is there anything unusual in the workers who serve the students, although a spirit of friendly helpfulness, quiet, order, and good cheer is apparent.

"Efficient management accounts for the success of the cafeteria," explains S. H. Thompson, superintendent of the Whittier schools. "Mrs.

Lulu M. Miller, who supervises the cafeteria, is both a good cook and a capable business woman. These qualities are essential in conducting an eating place where the handling of money is involved."

Before describing the operating methods, it is necessary to describe the kitchen equipment. The dining room and kitchen occupy a long, narrow room on the south side of the building, lighted with a continuous row of windows. The storeroom is located at one end.

## Labor-Saving Appliances

Dishes are stored in a long glass cupboard, having a worktable and shelves beneath. Dishes are washed and put into the cupboard from one side, and are taken out from the other as needed. Plates are stored in a cupboard under the steam table.

A double gas range and a bake oven are at the farther end of the kitchen, while near the center stands a large electric refrigerator, and two wide, metal-topped worktables. Ice cream is stored in an electrically operated container. A dishwasher, a cake and salad mixer, a vegetable slicer, and a potato parer, all purchased with cafeteria profits, save much hand labor. A tile-topped sink and worktable extend along the south wall of the kitchen. A double-decked, metal truck is used for moving heavy trays and quantities of dishes. After eating, the pupils bring their trays into the kitchen and stack their dishes and trays.

Cleanliness and fresh, first-class supplies are two essentials of this cafeteria's practice. Pupils are not permitted to pick out their own silverware, but each one's knife, fork, and spoon are wrapped separately in a paper napkin, which prevents soiling.

Boys and girls are served in separate lines. Each group receives checks which are immediately cashed at separate tables. Pupils act as checkers and make change, while others assist in serving the food, for which services they are paid 20 cents an hour. Part-time kitchen help receives 50 cents an hour. Three women cooks are employed regularly. There are two regular periods for serving, 11:30 and 12:30, but classes come and go until one o'clock.

## The Financial Plan

At the close of each day's business, student helpers count the cash. The manager then re-

## A MODERN HEALTH SERVICE

Any school procedure harmful to the health of the pupil or teacher is educationally unsound, and it is an important function of modern school health service to discover and remedy. This broad conception goes far beyond the older ideal of a health service which spent its time and energy finding and recording defects corrected, and to provide special clinics and special types of schools to mitigate the misfortunes of handicapped children. It seeks to do more than merely to find in existing school buildings, curricula and equipment, the specific features which may react unfavorably on the health of the child.

It seeks rather to have its opinions received with respect and attention when after careful scrutiny of the plans for new buildings, or the details of changes in the curricula or other features of school administration, it condemns or approves them from the standpoint of the school child's well-being, physical, mental, or emotional.

— A. M. Kerr

counts the receipts and sees that the checks, registers, and the cash agree. One of the children deposits the money in a local bank each day. The superintendent of schools, whose office is in the building, pays all bills after they are approved by the cafeteria manager.

From 30 to 50 lunches are delivered daily to the primary pupils at the Lincoln School near by. The food is packed in pots, cans, and boxes and transported in a hand wagon by one of the pupils. Each day's lunches are alike, but the menu is changed daily. Three dishes are served for 15 cents. The cafeteria receives 11 cents per lunch; the 4 cents difference pays the woman who serves the lunches at the Lincoln School.

Children's checks average 17 to 18 cents each. A month's credit occasionally is extended to pupils and parents. Some of the latter pay for their children's lunches four weeks in advance. If bills are not paid promptly, the child's lunches are stopped and his report card is withheld.

## Economical Buying

"The first place to save cafeteria money is in the purchase of supplies," points out Mrs. Miller. "We buy in as large quantities as possible, without danger of goods getting stale, in order to secure low prices. Flour, meal, beans, rice, and macaroni are stored in large tin containers.

"All groceries are purchased from a wholesaler, who keeps us posted on market conditions. For example: The tomato pack last year was short, which resulted in higher prices last spring; therefore, we laid in a supply of canned tomatoes.

"Fresh vegetables are selected daily from the truck of a local dealer, who supplies us at low prices."

Keeping in close touch with the cooking and serving, and assisting in these operations, is another essential of success, according to Mrs. Miller. Two of her domestic-science classes are held in the cafeteria. This enables the teacher to supervise the kitchen workers, while giving instruction to the students.

## Saving Scraps and Leftovers

Prevention and utilization of waste is another worth-while feature of the cafeteria. The importance of this is indicated by the fact that one-third cent, if saved on each dish served, amounts to \$500 a year. Every particle of material possessing food value is utilized. Vegetables are carefully peeled. Beet and turnip tops are cooked with spinach for greens. Unsold food portions are used in making hash, salad, or other appetizing dishes. This is a big item, because vegetables are the mainstay of the John Muir diet. It is easier, of course, to throw away the scraps, but this material represents the difference between profit and loss, and is often more wholesome than new food, because it is thoroughly cooked.

## The Guiding Choice in Foods

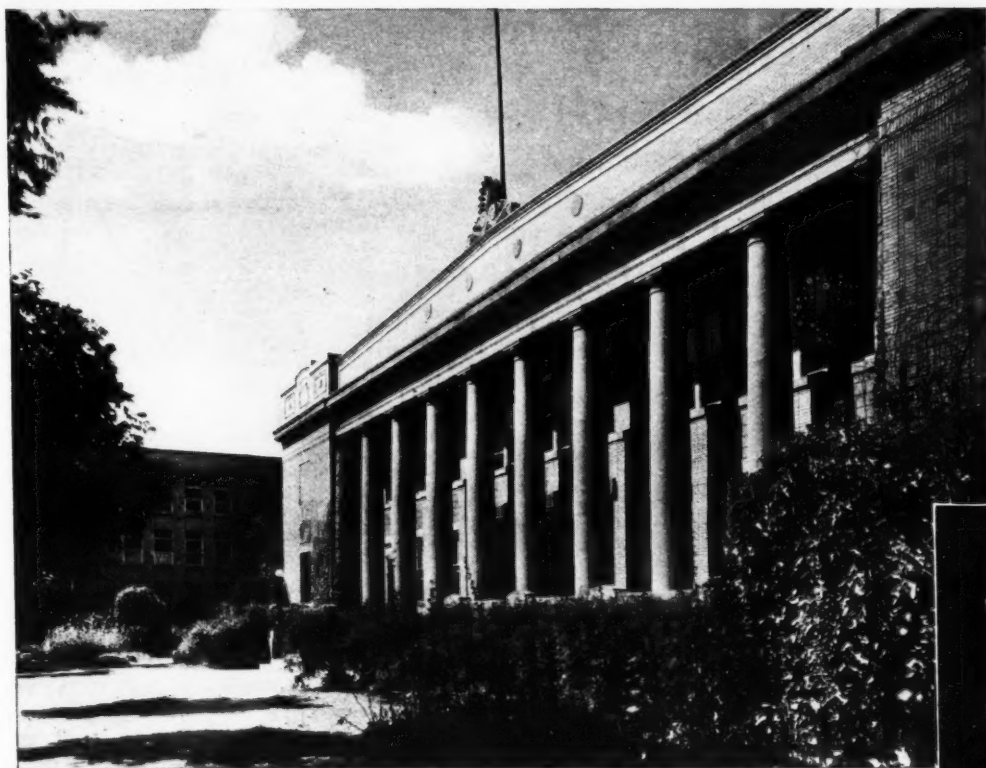
"It is a great mistake," said Mrs. Miller, "to give children whatever they want, and to let them have all kinds of food eaten by adults. The special requirements of growing boys and girls should be considered by those who feed them. Appetite is not a safe guide in the choice of foods, even in children, because abnormal tastes often have been cultivated and bad eating habits formed. It is the duty of a domestic-science teacher and school-cafeteria manager to guide children in the intelligent selection of foods."

In common with the leading dietitians, Mrs. Miller believes that children need little meat,

(Concluded on Page 128)



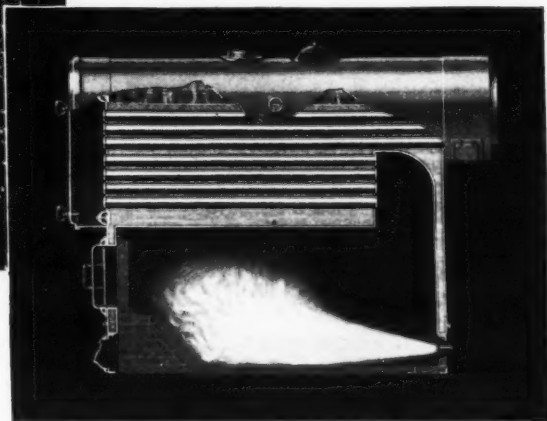
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"Although the total amount of cast iron radiation in our institution is 24,000 square feet, during 80% of the time we used only one boiler and, without forcing, heated our buildings comfortably.

"The boilers seem peculiarly well adapted for economical and efficient burning of oil."

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Several distinctive features make Heggie-Simplex Steel Heating Boilers "peculiarly well adapted" to the efficient use of oil. The huge fire box and secondary combustion chamber provide ample room for the oil to burn in suspension and to obtain complete combustion before reaching the flues. The extra large area of heating surface in direct contact with the fire, absorbs its radiant heat quickly.

Unrestricted water circulation carries the heat to outlets without waste. Burned gases before reaching the chimney are stripped of all usable heat by traveling twice the length of the boiler through rear-front-rear tubular flues.

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**We have every kind of paint and varnish for every school use from floors to desks—from cellar to roof—for inside and out**

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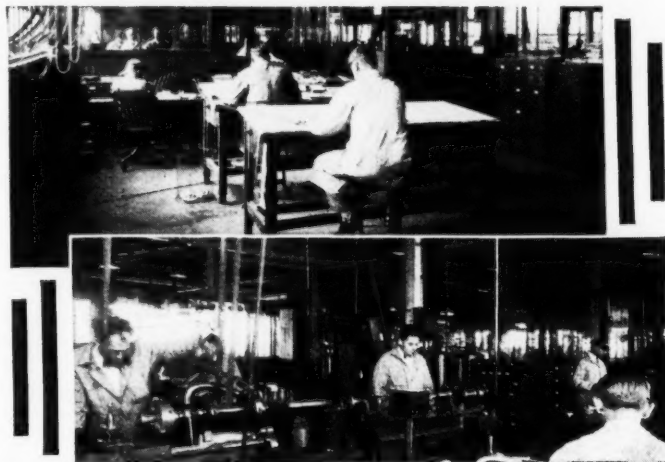
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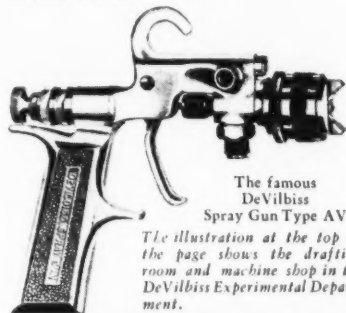
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# Children are eager to help when SOLARS are handy

The gravity operated top of the patented Solar holds a mysterious fascination for children. Almost like magic it swings easily open at their lightest touch and silently closes again when waste material is safely deposited within. Children never tire of using the Solar—it actually changes children from a source of disorder and confusion to positive aids to sanitation and cleanliness. You will never know how the student can help in your campaign against scattered rubbish until you install Solars. You will never know what willing little hands can do to lessen your janitor's tasks until you adopt this modern method which is so rapidly replacing old-fashioned, open waste receptacles.

Having only one moving part and no complicated mechanism, there is nothing about the Solar that can wear out, fail to operate or otherwise cause trouble. Being gravity operated and absolutely controlled by the hand which is in the act of depositing waste, there can be no danger.

*The automatic top cannot slam shut—it cannot close except as the hand is removed—it is safe for little children.*

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## SOLAR Self-Closing RECEPTACLES

### School-Board News

♦ Youngstown, Ohio. By a unanimous vote of seven members, the school board recently approved the suggestions of Dr. Henry Suzzallo, providing for the establishment of a permanent research head for a continuous study of the school system. The resolution included a provision that the 1931 budget take care of the expenses of the research department to the amount of \$7,500.

♦ Iron River, Mich. Under a new economy program of the school board, decreases aggregating \$2,148 a year have been realized in janitorial services in the high school and two grade schools. The board has employed the janitors on a contract basis, which provides that the successful bidders must keep the buildings clean, furnish all labor needed, fire the furnaces and operate the ventilating system, keep the school grounds in good condition, clean and dust when necessary, remove snow from walks and entrances, and take general charge of the buildings during the day and at night when special meetings or programs are held. The janitors in the several buildings are permitted to employ as much help as they deem desirable, to comply with the rules and regulations specified in a schedule prepared by the superintendent. Janitors are required to pay their help from their checks.

Previously, it had cost the school board \$10,640 in janitor salaries a year at the three buildings, while under the new basis, the cost will be only \$8,222, or a saving of \$1,200 at the high school, and \$800 and \$400 respectively at the two grade schools.

♦ Rockford, Ill. The school board has adopted a rule, providing that supervisors, principals, and teachers will be automatically retired from school service upon reaching the age of 67. The rule becomes effective on January 1.

♦ Clinton, Ill. In the face of an increased enrollment, the school board has reduced the teaching staff through a careful distribution of the pupils.

The board has carried out a lighting survey, undertaken by a representative of the local power company, with the result that an improved system of lighting has been installed. A perpetual inventory of the rooms in all the buildings has been installed, as well as a stockroom, and a complete stock-book system.

♦ City Attorney J. M. Niven, of Milwaukee, Wis., has recently given an opinion, in which he holds that the city purchasing department has no jurisdiction over the purchases or sales of school property. The opinion was given at the request of the city purchasing agent, who asked whether his department had a right to sell scrap from dismantled schools and school buildings.

♦ The state board of education of Texas has reported a total of state school funds amounting to \$28,000,000, which is equivalent to \$17.50 per school child. There is a net cash balance on hand of \$2,004,188, with a special income of \$14,008,567 and a net income from taxes of \$11,895,141.

♦ The schools of New York City opened the new school term with an enrollment of 1,077,000, which was divided among 886,000 elementary and junior high school pupils, 181,500 senior high school pupils, 3,000 in training schools, and 6,500 in vocational schools. A total of eighteen new schools, with seats for 28,000 pupils were occupied. By October 1, it was estimated that 8,000 additional sittings would be available. The total increase in school population over last year was estimated at 17,000, so that a fairly large reduction may be made in the number of children receiving part-time instruction. The amount of part-time has been reduced from 89,000 in 1923 to 62,000 in 1929-30.

♦ The Talkie, an active part of the modern school curriculum, was demonstrated in the new Ventnor City, New Jersey, High School on September 11, with a special program of educational pictures. The new school was built and equipped to offer every teaching aid, including an installation of sound-film equipment for the auditorium. The projectors were selected after a careful study of the adaptability of educational talking pictures to school use.

A number of prominent educators and public officials witnessed the initial presentation of five educational talking pictures. Mr. Wilbur Zimmerman, president of the board of education of Ventnor City, outlined the plan of including the sound film in the work of the school, and Mr. V. C. Arnsperger, director of research for the Western Electric Company, described the plans formulated for the development of a film library of educational talking pictures.

♦ Clinton, Ill. The board of education had for some years carried a heavy burden in the expenditure for indigent books. Last fall, Supt. Arthur Vernor began a study of the question to see if a remedy could be made for the condition.

In the initial operation of the plan, Mr. Vernor first required that indigent books be issued upon the requisition of the teacher in the grade to which the pupil belonged. The teacher was made responsible for the return of the books when they were no longer needed, or at the close of the school year. The books were then returned to the stockroom.

As a result of the plan, a total of 864 books were reclaimed and returned to the school office, with a saving of \$900. During the opening week of school in September, 65 children were equipped with books without any additional expense to the school board. The plan has been a remarkable success and the school authorities are pleased with its results.

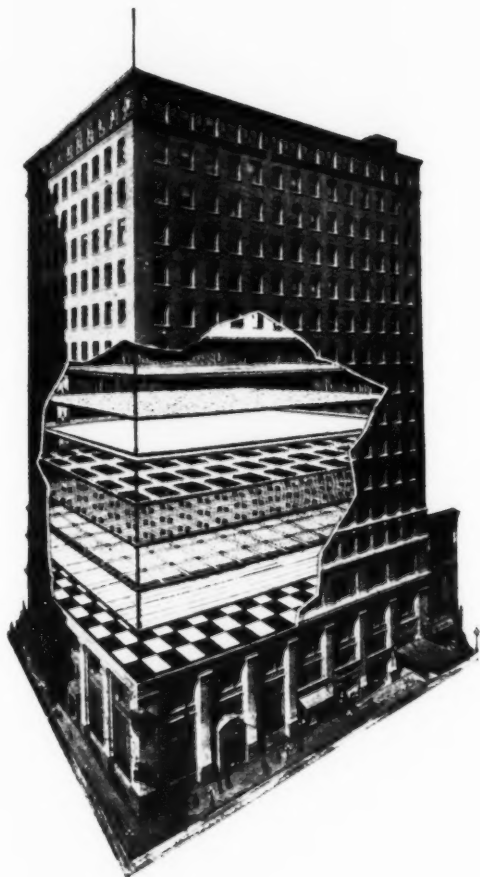
♦ The community high-school district at Galva, Ill., was dissolved by the circuit court in July. A new community high-school board was elected in August. The school district is operating under the new administration and the faculty has been taken over by the new board.

# Any Floor In Any Building

*Will look better and wear longer when maintained and preserved with*

## Shine-All

And all because SHINE-ALL does more than clean. Each time it is used the floor receives an attractive, lustrous sheen that protects against heavy traffic. SHINE-ALL is neutral—it has none of the injurious ingredients commonly found in ordinary cheap imitations, such as abrasives, caustics, alkalis, lye or ammonia. Play safe - - - maintain your floor investment the SHINE-ALL WAY!



### Attention —

*will be given your floors under the direction of a Hillyard Floor Maintenance Engineer (symbolized by the ever ready Shine-All Soldier—NEUT) at your request. His service and recommendations are FREE—places you under no obligation. Write us for this service.*



## Shine-All Sales Company

*distributors for*

**Hillyard Chemical Company, St. Joseph, Mo., U.S.A.**

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♦ Akron, Ohio. The public schools opened with a decrease of 49 teachers. The decrease in the teaching staff effected a saving of \$73,500 and made it possible to pay the automatic increases in teachers' salaries.

♦ East Palestine, Ohio. The school board has awarded contracts for lump coal at \$2.53, run-of-mine coal at \$2.28, and slack at \$1.53.

♦ The school board of Pocatello, Idaho, has adopted a budget, amounting to \$328,300 for the school year 1930-31. An appropriation of \$10,694 was made for transportation, and \$58,285 for the bond and sinking fund.

♦ Idaho Falls, Idaho. Two new school buildings, one a ten-room elementary school, and the other the first unit of a junior high school, were completed and occupied on September 2. The elementary school houses 400 students and was completed at a cost of \$60,000, while the junior high school has accommodations for 400 students and was erected at a cost of \$100,000.

♦ Madison, Wis. A ten-year building program, proposed by Supt. R. W. Bardwell, has been approved by the school board. The first step in the new program is the adoption of plans for an addition to the East High School.

♦ Wichita, Kans. The school board completed a building program during the past summer, which provided 37 new classrooms, each capable of housing 40 students.

♦ Chicago, Ill. During the past summer, the school board expended \$1,000,000 in new school-construction work and the repair of a number of existing structures. A total of 24 senior high schools, 24 junior high schools, and 307 elementary schools were opened with the beginning of the new school term.

♦ Lorain, Ohio. The school board completed its summer program of repairs and improvements, which was the largest program to be undertaken in ten years. Some of the more important projects included the resurfacing of 2,000 desk tops in various schools, the painting of half a dozen school build-

ings at a cost of more than \$5,000, the repairing of the floors, and the replacing of window sash.

♦ The school system of Dayton, Ohio, has been forced to effect a heavy reduction in its school budget due to a shortage of \$81,186 in city school funds. The shortage for the city schools, which was almost as large as that of the city government, existed against the revised school budget, which like that of the city, was based on a low tax-distribution figure. The present financial situation is attributed to a shortage in tax revenue as a result of a large amount of delinquent taxes applicable to the city.

♦ Akron, Ohio. Supt. T. W. Gosling has reported to the school board a program that will permit a total saving of \$77,000 in teachers' salaries. The plan contemplates a reorganization of the teaching staff that serves the elementary schools, with 69 fewer teachers than were employed last year.

♦ The New York City recreation committee, now a section of the city welfare council's division on recreation, has worked out a plan for a city-wide scheme of playgrounds by means of borough-wide assessments. The committee has for eight years co-ordinated the work of fifty organizations in non-commercial recreation, and each of these organizations is represented by two delegates in the new section which has been formed. The new system seeks to provide a sufficient number of well-supervised play spaces in every part of the city.

♦ A three-year pupils' health program has been undertaken by the New York Principals' Association, in co-operation with the department of health, the board of education, and the parents' association. Mrs. Helen C. Manzer, executive officer of the association's committee on health, in

**A rotten culture begets a rotten education, and a good and vigorous culture in grown-ups means a good education for children.—Gilbert K. Chesterton.**

a recent radio talk, explained the new health program and urged parents to keep in touch with the schools and to coöperate with the school authorities in making the program for better health a success.

Mrs. Manzer suggested five ways of keeping children well:

1. Make sure his clothes are suitable to the weather and that they fit him comfortably.
2. See that he doesn't play too hard before supper.
3. Make sure he gets sleep enough for his age.
4. Have the windows in his room open, but don't let him sleep in a draft.
5. Keep him happy, and give him a taste of success every day.

♦ The school board of Minneapolis, Minn., has adopted a recommendation of Supt. C. R. Reed, for a director of service and records. The new official will have charge of the social and welfare work, child guidance, attendance, visiting teachers, and clerical work.

♦ The school board of Spokane, Wash., has awarded contracts for steam coal at \$6.44 per ton, and lump coal at \$10.55 per ton.

♦ Chisholm, Minn. A suit has been begun in the court against the school board, protesting the board's contract for the year's coal supply. The relators alleged that they had bid more than \$1,100 less than the other parties who were given the contract.

♦ Peoria, Ill. Appointment of the school board by the mayor, instead of election by the voters, as at present, will be effective in the near future as a result of the change to a city of more than 100,000 population. The change follows a ruling of the attorney general, affirming a similar ruling of State Supt. F. G. Blair at Springfield.

♦ Litchfield, Ill. Promotion by subject has been introduced in the departmental school this year. Mid-year promotions have been introduced, the first class operating under the new rule last year.

♦ New York City. A salary of \$5,000 a year has been established by the board of education for the

(Continued on Page 116)



# Perfect attendance

... but how about



perfect  
*attention?*

*Universal Heating and Ventilating Units are Quiet in Operation, Dependable, Reliable and Pleasing in Appearance.*

**T**RAINING and discipline count, but it is useless to try to maintain perfect attendance when the schoolroom is filled with hot, stuffy, devitalizing air. Children just can't pay attention ... can't concentrate ... when they are uncomfortable, when the temperature of the schoolroom is not right.

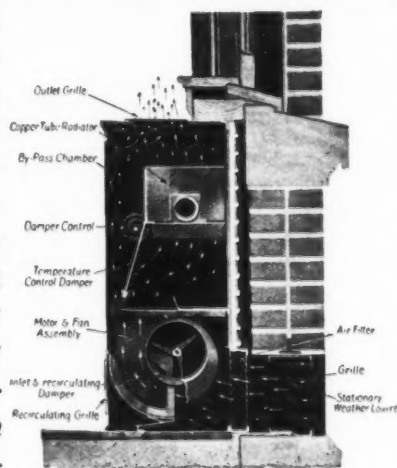
So much depends upon proper heating and ventilating of the schoolroom that too much care cannot be taken in the selection of heating and ventilating equipment. One of the finest tributes to the efficiency, economy and reliability of Universal Unit Heaters is that they are being constantly installed *with complete satisfaction* in many of the na-



tion's leading schools.

Universal Units deliver a vertical discharge of heated air at just the required temperature, quietly and without interruption. There is no underheating, no overheating, no drafts or stuffiness.

They have been designed and constructed to meet every heating and ventilating requirement for the one-room school and for the hundred-room school. They are recommended and specified by prominent architects throughout the country.



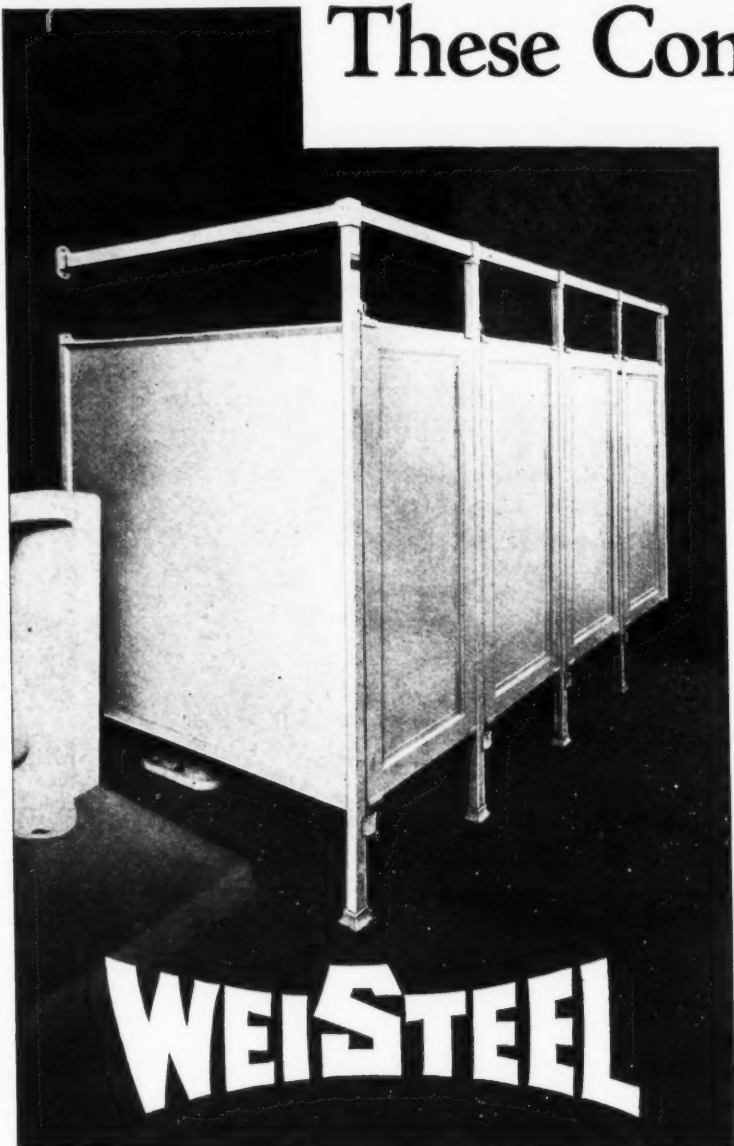
There is an American Blower Branch Office near you. Why not write, or phone, for detailed information? A list of prominent installations, as well as a catalog and engineer's data book, are yours for the asking.

## American Blower

VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT  
MANUFACTURERS OF ALL TYPES OF AIR HANDLING EQUIPMENT SINCE 1881

AMERICAN BLOWER CORPORATION, DETROIT, MICH. • CANADIAN SIROCCO CO., LTD., WINDSOR, ONT. • Branch Offices in all Principal Cities

# These Compartments Are Worth Remembering



SOME day you will be faced with the necessity of choosing toilet, shower and dressing room compartments, either for a new building or for rehabilitation work in one of your existing structures. WEISTEEL Compartments offer so many real advantages that they are well worth remembering until that time comes.

Exclusive principles of design and construction, such as the V-Rail reinforcement which is integral, with the panel and posts interlocked and welded, make WEISTEEL Compartments unusually strong and able to endure the rough treatment which school toilet compartments inevitably receive. The ingenious reinforcement of door stiles and rails, the simple and easily adjusted foot and wall fittings, the completely enclosed gravity hinge—these are points well worth consideration.

Remember the name WEISTEEL—remember that when you are ready, you can receive full information and suggestions based on our more than fifty-four years of experience by writing to this company. It will place you under no obligation to get the whole story about WEISTEEL Compartments.

THE HENRY WEIS MANUFACTURING CO., INC.  
Elkhart, Indiana

(Continued from Page 114)

two positions of research assistants. An examination of candidates has been conducted to select the persons to fill the positions.

♦ New York, N. Y. Trial promotion for the fall terms was won by 5,647 of the 7,056 students who were enrolled in the seven summer junior high schools conducted by the board of education during the summer months. A total of 12,107 elementary-school students made up their deficiencies by summer study. The summer schools are conducted during each vacation period for those who have failed in the regular term's work.

♦ Pocatello, Idaho. A total of 4,600 pupils have been enrolled in the ten schools of the system. The teaching staff comprises a total of 142 teachers.

♦ The New York State Federation of Labor, at its recent convention in Buffalo, adopted a resolution, urging the reduction in the size of classes in the public schools to increase their efficiency and to allow for the employment of idle teachers. The resolution recommended that larger appropriations be made by the state and local governments to provide for the employment of more teachers and for the great reduction of the size of classes. Attention was called to the thousands of training-school and college graduates, who have prepared for teaching positions and have passed the required examinations, but are still unemployed.

♦ New York, N. Y. An experiment to determine the value of talking films as an educational agency for use in the classrooms of the New York City schools has been begun for the benefit of the school officials.

The experiment, which takes the form of a demonstration, is being sponsored by the Electric Research Products. Dr. Gustave Straubenmuller will present a report to the school board, giving his views on the practicability of talking motion pictures as an aid to education.

Last year Dr. Straubenmuller presented two reports to the board of superintendents, one dealing with the value of the radio as an aid to education, and the other with the value of the silent movies in the schools. The extended use of the radio as a

direct factor in classroom teaching was banned by the school officials on Dr. Straubenmuller's recommendation, because "the radio is still in its infancy."

♦ The safety division of the school system at Duluth, Minn., has recently reported that no crossing accidents have been suffered by school children during the past two years, as a result of the work of the schoolboy traffic police. If a driver disobeys the signal, the boy officer takes his number and asks that a warrant be sworn out for his arrest by the regular police officer. The schoolboy traffic officers are recruited largely from the sixth grade. Their police duties have not been allowed to interfere with their schoolwork, but appear to have a beneficial effect upon it, according to reports of the teachers. As a reward for their services, the boys are regularly given a picnic by the business men and other citizens.

♦ New York, N. Y. The school board has adopted a rule, providing that no person may teach in the classrooms of the city unless he is

## INTELLIGENCE TESTS

It must not be thought that the function of any guidance worker is to make a pronouncement as of from high authority to any individual which would seem to settle definitely and for all time the one course of action which should be followed by that individual. Our present knowledge is too limited to warrant any such sweeping pronouncements; even the wisest and best intentioned person is far from infallible in his judgments; few humans are so heavily endowed or so poorly gifted that one and only one avenue is open to them; practically all humans change in minor or greater degree as they attain years of maturity.

— Ralph E. Pickett,  
New York University

regularly licensed by the local board of examiners. It was pointed out that the board has adopted a policy not to admit outside and unlicensed persons into the classroom, no matter how distinguished they may be. It was felt that to accept offers for demonstration-teaching would establish a precedent and the board would be besieged with similar offers from other persons who might desire to demonstrate teaching methods or devices.

♦ State Commissioner Frank P. Graves of New York State has been asked to settle the question of whether or not the New York City school authorities have the power to allow salary credit to trade or commercial teachers who enter the school system with nonteaching experience. A group of teachers, headed by Joseph Sternbach, of the Roosevelt High School, has threatened to bring a mandamus proceeding in the courts, unless the school authorities resume the practice they abandoned last fall of allowing salary credit for business experience gained by teachers in trade or commercial subjects.

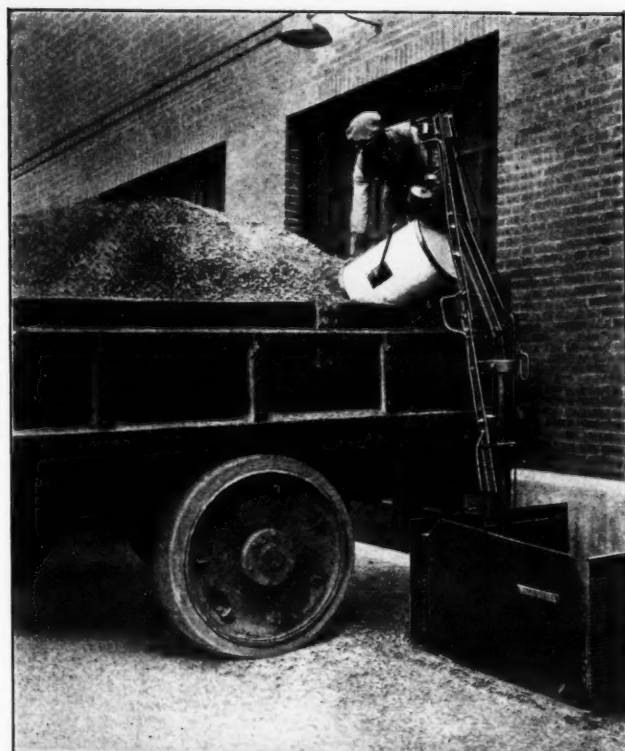
It appears that this had been done in former years. Last year the courts held that the board of retirement had no power to allow such credit for retirement purposes. This decision was interpreted to mean that the board of education likewise was without authority to grant salary credit for such service.

♦ Topeka, Kans. The school board has reduced the tax levy for school purposes from 1.575 to 1.52 for the school year 1930-31, which is a reduction of .055 mills. The budget calls for an appropriation of \$1,135,667, which is an increase of \$40,000 over that of last year.

♦ The Supreme Court of Mississippi recently held that the school board of the Moss Point schools acted arbitrarily and unreasonably in adopting an order that married persons should be barred from the schools. The court upheld the power of the trustees to make rules for the government of the schools. The rule was based alone upon the ground that admission of married children as pupils in the schools would be detrimental to the good govern-

(Concluded on Page 118)





# Annual ROLL CALL

The  
**G&G**  
ELECTRIC  
REG. U.S. PAT. OFF.  
**Telescopic Hoist**  
With Automatic Stop and Gravity Lowering Device

## In the Nation's Schools

G&G Ash Removal Equipment is used in schools in 44 states. It is now *standard equipment* with the Boards of Education in Pittsburgh, Seattle, Louisville, Kansas City, Mo., Kansas City, Kans., Cleveland, Baltimore, Washington, Boston and New York. Here are the leading state totals:

|                         |             |                          |            |
|-------------------------|-------------|--------------------------|------------|
| NEW YORK . . . . .      | 477 Schools | MINNESOTA . . . . .      | 54 Schools |
| PENNSYLVANIA . . . . .  | 204 Schools | MISSOURI . . . . .       | 53 Schools |
| OHIO . . . . .          | 197 Schools | MARYLAND . . . . .       | 37 Schools |
| NEW JERSEY . . . . .    | 167 Schools | INDIANA . . . . .        | 26 Schools |
| MICHIGAN . . . . .      | 111 Schools | WISCONSIN . . . . .      | 26 Schools |
| MASSACHUSETTS . . . . . | 109 Schools | DIST. COLUMBIA . . . . . | 24 Schools |
| ILLINOIS . . . . .      | 80 Schools  | KENTUCKY . . . . .       | 17 Schools |
| IOWA . . . . .          | 69 Schools  | DELAWARE . . . . .       | 16 Schools |
| CONNECTICUT . . . . .   | 67 Schools  | NORTH CAROLINA . . . . . | 14 Schools |
| KANSAS . . . . .        | 60 Schools  | SOUTH DAKOTA . . . . .   | 14 Schools |

Gillis & Geoghegan have been pioneers in developing ash removal equipment to eliminate the danger of the open hoist-way. Illustration shows patented opening-closing-locking sidewalk doors with spring guard gates, providing a complete barrier around the sidewalk opening when ashes and rubbish are being removed or when doors may be open for ventilation. When Hoist is not in use, the doors auto-

matically close flush with the pavement and lock. . . . G&G Ash Removal Equipment is also widely used in Banks, Churches, Hospitals, Hotels, Office Buildings, Theatres, Telephone Buildings, Stores, Factories, Garages, etc. Electric and hand power models for special uses. Write for Catalog.

## GILLIS & GEOGHEGAN

551 West Broadway 64 Years of Service New York, N. Y.

## Perfect cleanliness— and well within the budget!

**C**LEANING costs are low in schools that rely on Oakite for keeping floors, painted walls and woodwork, windows, and washroom fixtures free from grime and dirt.

And no wonder! For this amazing material takes the tediousness out of cleaning, eliminates hard scrubbing, and leaves no film on surfaces, to collect more dust and



dirt. Every job is quickly done; only small quantities of material are used; and the cost of the most thorough cleanliness is reduced to a minimum.

Now is the time to find out about Oakite from our near-by Service Man. Let him call and show you the remarkable economy of this effective material. A post card will bring him. Write it today!

Manufactured only by

OAKITE PRODUCTS, INC., 26B Thames St., NEW YORK, N. Y.

# OAKITE

TRADE MARK REG. U. S. PAT. OFF.

## Industrial Cleaning Materials and Methods

*Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the United States and Canada.*

(Concluded from Page 116)

ment and usefulness of the schools. It was further argued that married pupils are as much subject to the rules of the schools as unmarried and are punishable to the same extent for a breach of the rules.

♦ The Appellate Court of Illinois in a recent decision has upheld a decision of the LaSalle County Circuit Court, under which the board of education of Earlville was allowed a judgment of \$1,158 against the board of education of the nonhigh-school district of LaSalle county. The Earlville board had sued to collect additional tuition which it claimed was due for students residing outside the district. The nonhigh-school district board claimed that the tuition was paid to cover the education of the students, but that under the law, the school board could not charge for building depreciation, upkeep, and other incidentals. The Appellate court ruled that the school board has the right to figure depreciation, upkeep, and rent in tuition costs.

### RADIO IN EDUCATION

♦ Plans have been completed for the coming year's broadcast of educational material for school use in the state of Ohio. The broadcasts are given from the studios of WEAO of Ohio University and from the Crosley studios WLW at Cincinnati, and include those features most favored in the courses given last year. The new schedule provides for fourteen features, to be presented each on a definite day and at a definite time each week. The daily program covers one hour, which is divided into three equal portions on four days of the week and into two portions on the remaining day.

♦ Chatfield, Minn. A complete public-address system, consisting of a Majestic rebuilt radio, with amplifying unit of 20 speakers, and a microphone, has been installed in the school buildings. The work of installing the system was performed by local labor, at a cost of between \$400 and \$600, which is considered very economical. The cost of the system was met by contributions from the respective school funds.

♦ Mr. L. R. Alderman, of the U. S. Office of Education, speaking recently on radio as the great-

est medium of education, declared that numerous educators have accepted radio as an important medium of extending their services. A total of 45 colleges and universities in the country have established courses in which instruction is given by radio. There are 77 colleges and universities which have established broadcasting stations of their own, and each is equipped to diffuse information of an educational and civic character. Approximately 80 other institutions of higher learning broadcast matter over commercial stations, according to Mr. Alderman.

The State of Massachusetts is given credit for having operated and launched the first radio course given in college work. The broadcasting of educational lectures as a part of the college course began in 1923 with three students enrolled. Since then, in the 29 subsequent courses given, 7,500 students have been enrolled.

♦ Radio has become a definite part of the educational system in the Chicago public schools, as a result of the pioneering efforts in education by radio, conducted by the Chicago Daily News station WMAQ. The program is the result of several months of work on the part of a committee of twelve school principals, headed by Mr. G. P. Drueck, Jr., of the Jacques Marquette School.

To insure that the programs will be truly educational, the entire matter of program making and the selection of radio teachers, was given over to the educational staff of the public schools, under Supt. William J. Bogan and Asst. Supt. Rose A. Pesta.

The committee in its work, has sought to make the program rich in subjects offered and to cover the entire span of grades one to nine inclusive. It has obtained a corps of instructors rich in experience and contact with school children.

### TRANSPORTATION HELPS ATTENDANCE

♦ The school board of the Crystal Lake Community High School, Crystal Lake, Ill., in September, 1927, adopted a system providing for the transportation of high-school students living more than two miles from the high-school building. Under the system, students in the Fox River Grove

and Cary school districts were given free transportation to the school building. Students living more than two miles from the school and in a district not served by a bus line were permitted to arrange for their own transportation through a daily subsidy of not more than 25 cents per student in attendance.

The plan has been successful in materially increasing the attendance. The high-school attendance this year (1930-31) is reported to be in excess of 350 students. The cost of operation for the transportation system has increased from \$3,683 in 1927-28, to \$5,523 in 1929-30.

### HYGIENE AND SANITATION

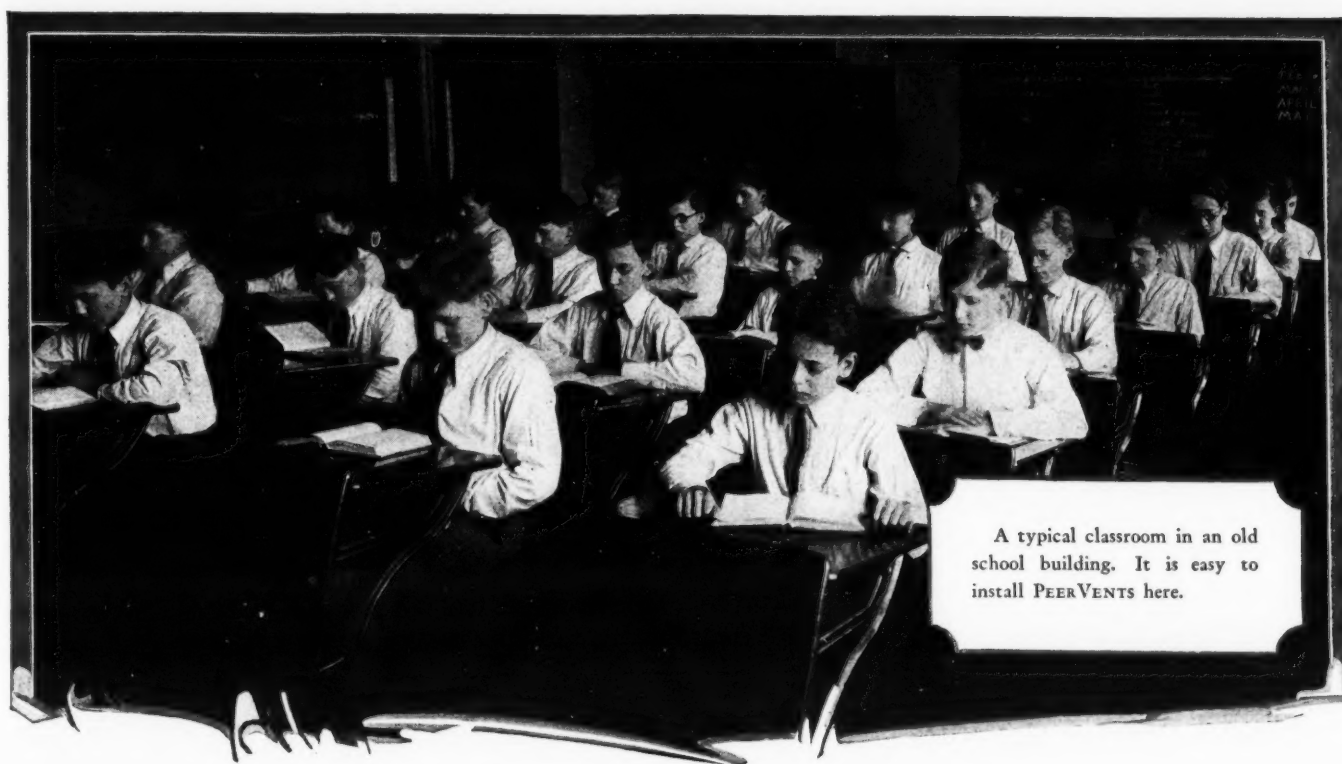
♦ A nation-wide campaign has been begun by the Eyesight Conservation Council to eliminate conditions which bring about defective eyesight in the public schools. Under the plan adopted, the work will be carried on by a group of engineers, scientists, government officials, and educators, who will have the assistance of industry, health, and business organizations.

The council has provided for the establishment of local councils in each state, in order to better secure the coöperation of sectional groups. The council has concentrated its activities upon legislation to safeguard the individual and has begun a survey to reveal conditions as they exist in schools and industries.

♦ New York, N. Y. A three-year school health survey has been inaugurated in the schools by the health department with the reopening of the schools for the year. The survey will cover a selected school district of 20,000 to 25,000 children, with a view of developing a plan for general school use. It will endeavor to ascertain whether a more exhaustive examination is desirable, and whether different types of examinations should be used in the different grades. The fullest coöperation of the homes of pupils will be sought, so that any defects disclosed may be corrected where possible by their private physicians.

Methods of health education now employed in the city schools will be studied with the purpose of more effectively coördinating the examination of the children with the other health activities.





## Schoolboards come back again and again for PeerVents

ONCE a schoolboard has tried out the PEERVENT System, the service is found to be so satisfactory that invariably additional orders are placed and other installations are made.

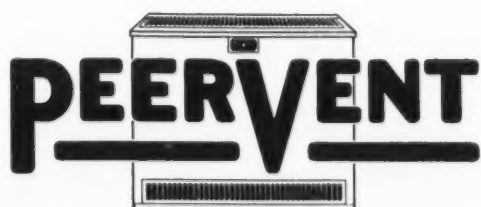
A public school in Hackensack, New Jersey, built in 1914, was equipped throughout with PEERVENTS. Fifteen years later, or last year, a new school building was completed. The PEERVENT System was again installed, so efficient and satisfactory were the original PEERVENTS.

In Lackawanna, New York, in 1923, Public School No. 3 was PEERVENT equipped. In 1924, Public Schools No. 2 and No. 5 were so equipped. Finally, in 1929, four new schools, the new High School, the Washington School, the Bethlehem School, and the Roosevelt School, were all completely equipped with the PEERVENT System.

Repeat orders such as these are

convincing proof of the satisfactory and efficient operation of the PEERVENT System.

When planning your next school or when remodeling—for PEERVENTS can be installed in old buildings as well as new—investigate the New Improved PEERVENT—Ask for a Peerless Engineer to call and discuss your plans—He will have some valuable suggestions for you.



PEERLESS UNIT VENTILATION CO., Inc.  
BRIDGEPORT, CONNECTICUT  
*Pioneers in Unit Ventilation*

Resident Engineers in Principal Cities from Coast to Coast



# DAYTON Safety Ladder

(Patented)

## FALL COLORS?

They're never new. They're always *black-and-blue*, for anyone who falls from an old-fashioned stepladder.

The Dayton Safety Ladder keeps the workman *up* there, working—and gets him *down*, safely. It is strong, light, steel-braced. Wide leg-spread gives stable stand in aisles; straight back permits close work next to walls. The Dayton has a large, guarded platform, with unusually ample working space. Ladder folds flat, for easy carrying. Sizes 3 to 16 feet. Moderately priced.

### Type "B" Dayton Ladder

Small, popular-priced, safe for all purposes. Made in seven sizes.

Write Dept. ASBJ-10 for  
complete information

## THE DAYTON SAFETY LADDER COMPANY

121-123 West Third Street, CINCINNATI, OHIO

Stock carried by Pacific Coast representative, E. D. Bullard Co., Los Angeles and San Francisco, and by 160 other distributors from coast to coast. Made and distributed in Canada by Percy Hermant, Ltd., Toronto.

### ASK REDUCTION OF TEACHERS' SALARIES

The Cleveland board of education has been petitioned by a local association of building owners and managers to reduce the salaries of teachers. The claim is made that the teachers' salaries were raised when the purchasing power of the dollar was at its lowest ebb.

"Today the situation is exactly reversed," says the petition. "The dollar's purchasing power is rapidly increasing and a stationary—dollar income is an increasing economic income."

"The teacher payroll is by far the largest item in the cost of public education. This year it will be \$12,800,000, shared by 4,925 teachers and principals. When the system of automatically advancing teachers' pay every year went into effect ten years ago, there were about 4,000 teachers and the payroll was \$8,079,000. While the teaching force has been augmented less than one-quarter, the payroll has increased more than 30 per cent, since the school year of 1921."

A resolution requiring the suspension of the automatic increases of teachers' salaries has been submitted to the board of education by Mr. Alfred Benesch, chairman of the board's finance committee. In an address to the principals of the city, Superintendent Jones has declared that the automatic increases in salary are a thing of the past. The teachers are protesting that the schedule requirements should be continued.

### N.E.A. SEES EMERGENCY

The National Education Association has sent a bulletin to its membership in which it says: "Never before have the teachers of the nation needed a united profession more than at present. The financial depression, an oversupply of certificated teachers, and rapid changes in industry, in labor, and in social conditions have brought a new emergency in education. If the gains of the past decade are to be retained and if progress toward higher goals is to be continued, we must have a fuller realization on the part of the teachers of the nation of the importance of an organized and a united profession."

### THE TEACHER-SURPLUS PROBLEM

A federal study of the teacher surplus is being made by a committee consisting of William C. Bagley, John A. H. Keith, W. P. Morgan, D. B. Waldo, George W. Frasier, William Webb Kemp, M. E. Hagerty, William S. Gray, Henry W. Holmes, Sheldon Phelps, and W. W. Charters.

The study will aim to find a means of regulating the supply and demand of teacher talent. One of the results of the study, it is believed, will be to make more rigid conditions for admission to teacher-training schools, and for higher standards in teachers' efficiency.

♦ The board of education of Milwaukee, Wis., has agreed upon a budget for 1930 of \$11,900,000. The board is beginning the year with a balance of approximately \$250,000. The local teachers' association urges that this amount be expended in carrying out the single-salary standard.

### SCHOOL BUSINESS OFFICIALS' MEETING

The National Association of Public-School Business Officials will hold their next annual meeting May 19-22, 1931, at Richmond, Va. The headquarters for the meeting will be in the John Marshall Hotel.

The local committee on arrangements is completing its plans for the entertainment and housing of the delegates to the meeting. Ample space has been arranged for the exhibits.

Information concerning reduced transportation rates, hotels, and exhibits may be obtained from Mr. John S. Mount, secretary of the association, Trenton, N. J.

### PERSONAL NEWS

♦ Mr. J. B. HARTMAN, of Ridgeway, Ohio, has been elected superintendent of schools at Versailles.

♦ SUPT. S. O. HARTWELL, of St. Paul, Minn., has been reelected for another year.

♦ SUPT. C. E. WEBB, of Worthington, Ohio, has been reelected for a second year.

♦ Mr. W. A. PILLANS has been reelected as business manager of the school board of Lorain, Ohio,

with an increase in salary. Mr. Pillans who became business manager of the schools in 1920, has completed ten years of service.

♦ The board of education of Lexington, Ky., has announced the appointment of HENRY H. HILL as superintendent of the Lexington schools. Dr. Hill was formerly the head of the school of administration of the University of Kentucky.

♦ Mr. L. W. SCOTT, of Treece, Kans., has assumed the superintendency at Waco, Mo.

♦ Mr. F. C. MONTROCE has been elected a member of the school board at Troy, Ohio, to succeed the late P. G. Yantis.

♦ Mrs. MABEL WEEKS has been reelected president of the board of education of the Lyons Union School, Lyons, N. Y. Mr. GEORGE MILLER was reelected as a member of the board.

♦ Dr. J. P. BENSON, a member of the board of education at Joliet, Ill., died on September 12, following an attack of heart disease.

♦ Mr. C. S. PEARSON has been elected superintendent of schools at Pigeon, Mich., to succeed G. C. Adler.

♦ Mr. C. E. CHRANE, superintendent of schools of Boonville, Mo., for the past eighteen years, died on September 9, after an accident.

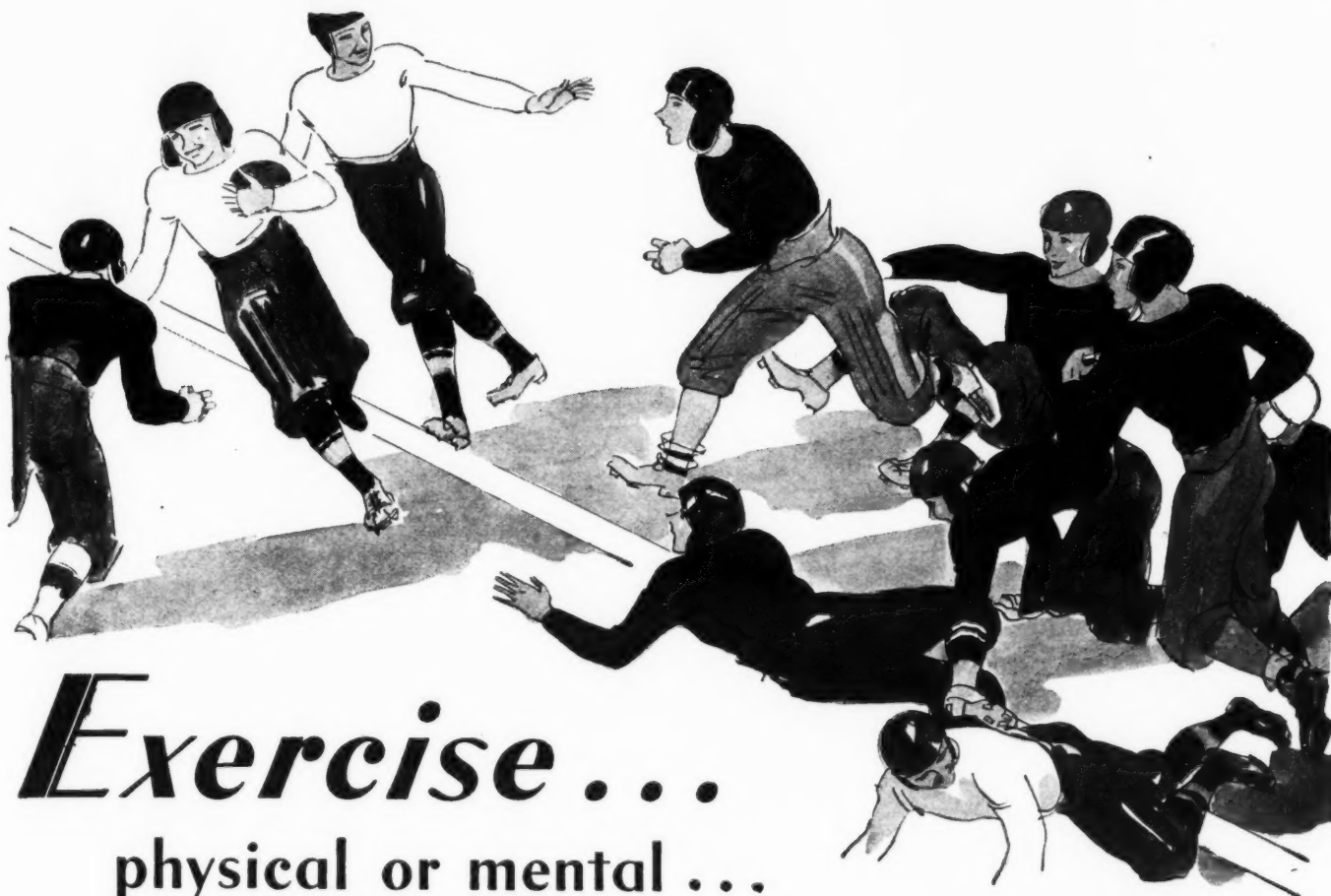
♦ Mr. L. E. LOOS has been appointed assistant superintendent of schools at Lake Forest, Ill. Mr. Loos is a graduate of Teachers College, Columbia University, and holds a B.A. degree from Wittenberg College.

♦ Mr. G. C. ADLER, formerly superintendent of schools at Pigeon, Mich., has become chairman of the social-science department of the Garfield Junior High School, Detroit, Mich.

♦ The school board of Johnson City, Tenn., has reorganized with the reelection of Mr. W. B. MILLER as chairman. Mrs. W. L. DUBBS and Mrs. D. R. BEESON have been named on the board to succeed Mrs. J. A. Summers and Mrs. J. E. Crouch, whose terms have expired.

♦ Mr. L. A. FRENCH has been reelected as secretary of the school board at Perry, Iowa.





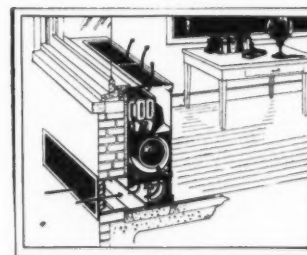
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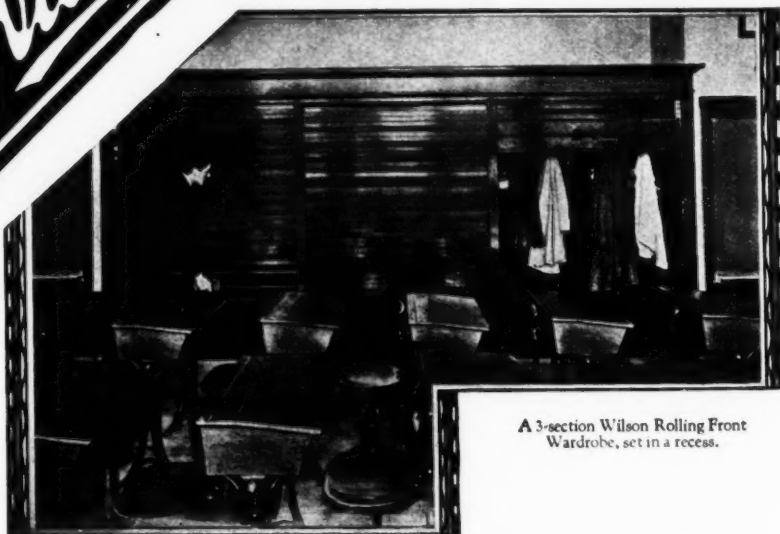
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#### CHICAGO CORRESPONDENCE

Chicago has an extraordinary junior-high-school record. In 1924, three junior high schools were opened experimentally. They proved a success. Today there are 23 junior high schools in operation, three of which opened up for the first time on September 2, 1930. Three other new junior-high-school buildings are now under construction; two of them will be ready for occupancy December 1, and the other will be ready February 1, 1931. The board of education has authorized eight others which have not yet been started, and two new buildings have been recommended by the superintendent of schools and their authorization is now pending before the board of education. Thus we find that there are 36 new junior high schools which have received the approval and recommendation of the superintendent since 1924 and are in various stages of completion.

Eventually, Chicago expects to have 80 junior high schools within the present city limits, and as the present boundaries are extended, no doubt additional schools will be needed.

Prior to last year, Chicago's method of dealing with truant boys was to hale them and their parents into Juvenile Court where an informal "trial" took place before the judge, with the principal, truant officer, and a representative of the Department of Compulsory Attendance acting as prosecutors. A boy would frequently be given another chance but if he erred again, he would be sent to the Parental School in the northwest section of the city where he stayed during the period of his commitment.

Last year, following a series of investigations, a departure in the method of dealing with truant boys was launched in the form of a new special day school for boys. Truant boys, instead of appearing in court, were transferred to this special school where they were given especially attractive work in smaller classes. This school is known as the Montefiore School for Boys. It became a clearing house for northside regular schools in truancy

cases. A dental, medical, and psychological clinic was established at the school. The school's success has been marked. On September 2, a second school, to be known as the Mosely School for Boys, has opened up on the near south side. In the case of both of these schools, the building was remodeled from an old and outworn elementary school.

Recommended as part of the 1930 school-building-construction program was a new specially designed truant school for boys, to be located in a better neighborhood in the South Shore area of Chicago. Property owners near by objected to its presence. They presented a petition purporting to contain 25,000 names against locating the project in their neighborhood. In the face of such a tremendous amount of protest, it became necessary for the school authorities to recede. The recommendation was withdrawn. And it now becomes necessary to attempt to secure another site in a neighborhood where there will be no objection (if there is any such place!).

The difficulty in locating this school illustrates to some extent the difficulty in selecting a regular school site in a neighborhood which is already partly built up. People want schools at hand for their children, and they protest if their children have to walk more than half a mile to school, yet almost every property owner will object if a site is selected across the street from his property. On one occasion when property owners were objecting at the selection of a junior-high-school site on which a \$2,000,000 building was to be erected, the superintendent of schools was heard to remark, "One would think we were planning to put a penitentiary into their neighborhood."

On the opening day of school, one of Chicago's large department stores published a full-page picture of a classroom scene with the caption, "School Begins Today—to Teachers: a Tribute." The picture is attractive and the tribute is phrased on a high plane. No advertisement accompanied the picture (it probably cost the store several thousands of dollars), except that fine print at one corner of the bottom of the page stated that prints

of this picture might be secured at the Personnel Service desk at the store.

At about the same time and in the same paper, the front-page cartoon carried the old-fashioned notion of school attendance, drawn by a veteran cartoonist who depicted a boy in great mental anguish. Underneath the cartoon was the doggerel "What makes the world a somber hue? And what is it that makes me blue? Some brooding cataclysmic doom, That shrouds me in its doleful gloom?" The cartoon is headed, "Probably It's the Beginning of School."

A year or so ago, a superintendent of construction on one of the new University of Chicago buildings then under construction was murdered. Newspaper accounts attributed the motive to labor troubles.

Recently there was a double killing on the scene of the construction of the new Lane Technical High School, a 6,200-pupil-capacity school being erected at Addison and Western Avenues. The business agent and another officer of one of the local unions went to the Lane site, it is said, to call a strike. Both were shot and killed. The son of one of the contractors and a foreman on the job were arrested and accused of the killings.

Bids have been received and contracts are ready to award for two additions, one elementary and the other senior high. The Senn High School addition will cost approximately \$1,800,000 and the Gresham Elementary School addition is expected to cost \$250,000.

On the opening day of school, Tuesday, September 2, the city health department started a campaign against diphtheria. Forty-two crews of doctors and nurses started to canvass the schools and check up on all children between the ages of 4 and 10, administering toxin-antitoxin where necessary. Serum is furnished free by the state. Heretofore, each child immunized has had to pay \$1 a treatment. Typhoid fever has become practically a forgotten disease in Chicago, and the city health commissioner hopes to put diphtheria in the same category.



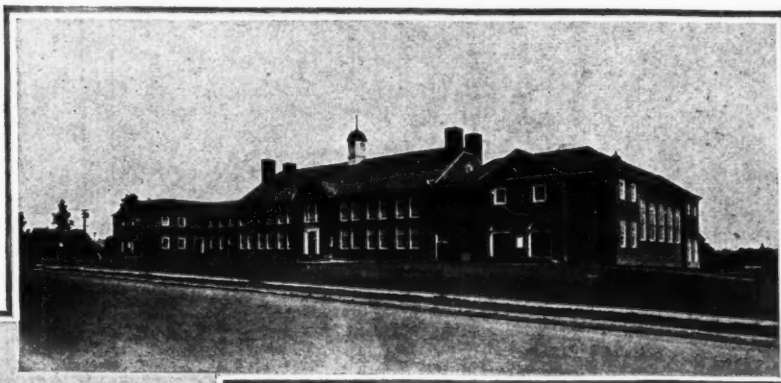


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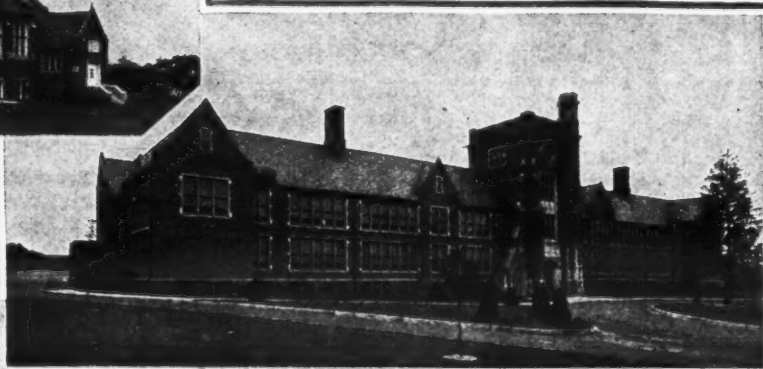
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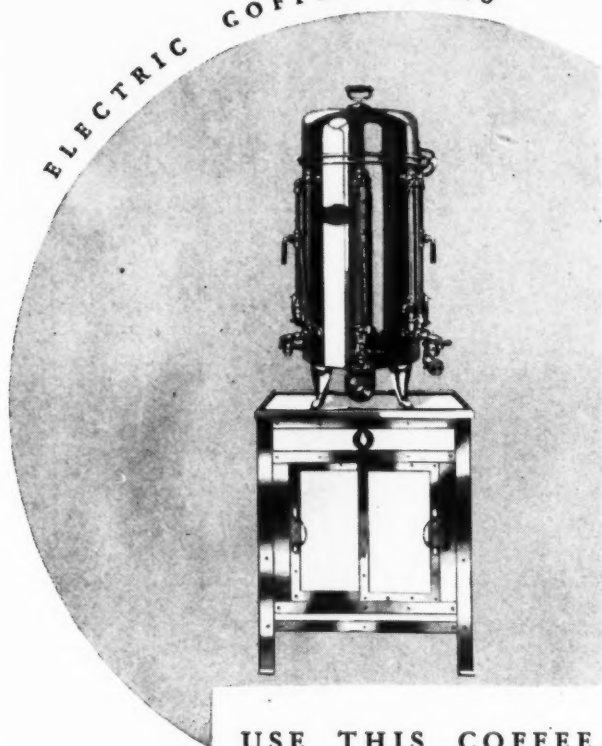
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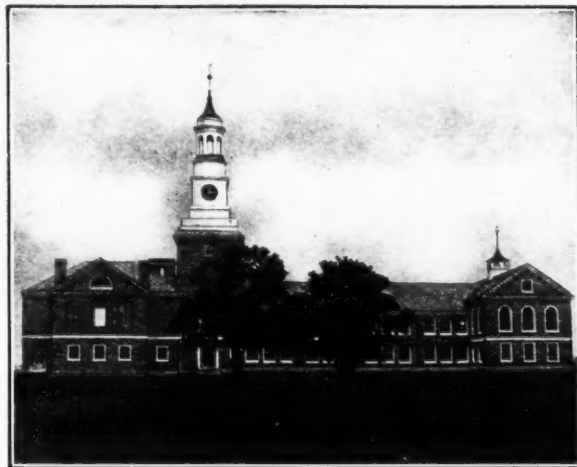
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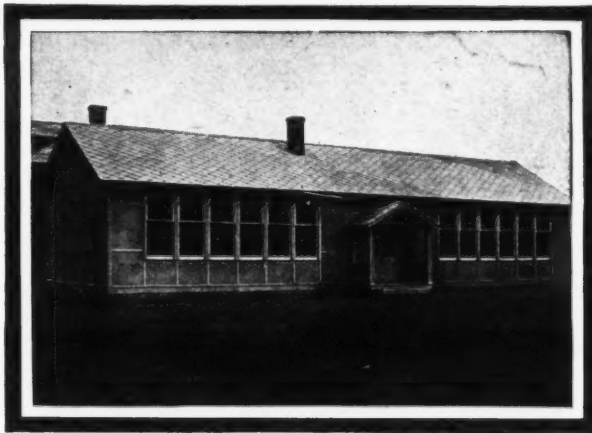
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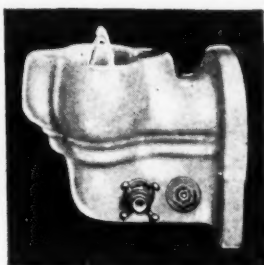
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No. 616

Automatic  
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No lips need touch two-stream projector, which gives ideal hygienic and practical drinking mound with automatic stream control to guarantee uniform height of drinking stream regardless of pressure variation.

Illustrated is No. 616 and No. 608, two of many popular models chosen for school installations everywhere.

THE architects (Warren S. Holmes Co.) selected for this building at Lansing, Michigan, Halsey Taylor Drinking Fountains.

For school use especially, these modern drinking devices eliminate the dangers of contamination since no lips need ever touch the distinctive two-stream Halsey Taylor projector. Other patented features not only guarantee protection but a welcome freedom from servicing . . . The Halsey W. Taylor Co., Warren, Ohio.

## HALSEY TAYLOR *Drinking Fountains*

### STATUS OF THE INCOME TAX

(Concluded from Page 61)

#### TABLE I

#### STATUS OF STATE INCOME TAXES AS SOURCE OF SCHOOL REVENUE, 1928.

##### Use of Proceeds Part 1

**Delaware.** Levied specifically for schools. Entire revenue devoted to state school fund.

**Massachusetts.** Not levied as a school tax. State sets aside from proceeds whatever amount is required to meet claims of schools; remainder (approximately three fourths) returned to cities and towns from which collected and may be used for schools.

**Mississippi.** Not levied as a school tax. Proceeds paid into state general fund of which more than half is appropriated for schools. "The needs of the general school fund (were) the most important factor in causing the adoption of our present income tax law."

**Missouri.** Not levied as a school tax. One third of all state revenue is devoted by law to schools.

**North Carolina.** Not levied as a school tax but adopted definitely as a device to provide school revenue in 1926 provided approximately 48 per cent of state general fund. In 1923, 15 per cent of state general fund was set aside as the state public school fund. Most important source of state general fund.

**Tennessee.** Not levied as a school tax. One third of all state revenue is devoted by law to schools.

**Wisconsin.** Forty per cent of proceeds retained by state and used to provide special appropriation for graded schools and high schools and for the remission of general property taxes required by law to be levied for the university, normal schools, and common schools. Proceeds of surtax on incomes devoted to teachers' retirement fund.

##### Part 2

States in which proceeds of income taxes benefit schools through appropriations from state general revenue. (Schools have no legal claim on states included in this group.) Connecticut, Mississippi, North Carolina, North Dakota, New York, Oklahoma, and Virginia.

#### TEACHER TENURE IN CALIFORNIA

The first teacher-tenure law in California was enacted in 1921. It substantially provided that, after a teacher had been appointed annually and had served for three years, she could not be dropped from the payroll, except for cause.

In discussing the operation of the law, Albert M. Shaw, president of the High School Teachers' Association of Los Angeles, says that the law was vigorously attacked in the legislative sessions of 1923 and 1925. He then related the fact that subse-

quently "an attack on the constitutionality of the law was made in Napa county. A teacher who was discharged appealed to the courts for reinstatement. The judge decided that the law was unconstitutional, on the ground that it was class legislation, since the law applied only to districts having more than eight teachers. Thus the judge upheld the action of the dismissing board of trustees."

Since then the law was amended so as to apply to all school districts. Mr. Shaw explains that "since school trustees in rural districts and the smaller communities do not wish to keep teachers permanently, no matter what their qualifications may be, very few teachers in such communities have secured tenure. For this reason these teachers have not favored our present tenure law and this situation has developed one of the outstanding objections of teachers to the law. It is equally distasteful to rural trustees. Among other objections to the present law are the following:

"1. The law seems to encourage appeals to the courts instead of to the educational authorities. As a comment on this feature it should be understood that no law could curtail a teacher's constitutional rights in appealing to the courts on matters of law, but it is felt that questions of a teacher's fitness of service, or his efficiency in the schoolroom can best be decided by educational authorities. For this reason it is suggested that appeals should first be to county boards and then to the state authorities and their decision to be final unless points of law have been raised.

"2. There seems to be no statute of limitations on the matter of appeals by a teacher from the decision of a board of education. This makes it possible for a teacher to open a case again years after a dismissal occurred. This has caused much dissatisfaction.

"3. It has been suggested by many that causes for dismissal should be made even more definite than as given in the present law.

"4. It has been felt that teachers should not only have the right to 'call' witnesses as stated in our present law, but actually have the right to subpoena them."

#### SCHOOLS ON MAIN STREETS OPPOSED

The Passaic County Planning Commission has approved a recommendation of the Passaic county

board of New Jersey, urging that in the future all possible means be used to oppose the placing of schools on chief arteries as a helpful measure for safety and traffic problems. The state highway commission, although agreeing with the idea of the board, declared that it lacked jurisdiction on the question.

#### SCHOOL-BOARD CONVENTIONS

The Illinois School-Board Association will meet at Decatur, Ill., on October 23 and 24. The association is well officered and provides a good program each year. In its announcement it promises "new ideas, experiences, and new points of view on school matters."

#### REMOVAL OF ARCHITECTURAL OFFICES

Messrs. Malcomson & Higginbotham, architects, of Detroit, Mich., have announced the removal of their architectural offices from 1217 Griswold St., to the sixth floor of the Malcomson Building.

#### ARCHITECT MOVES OFFICE

Frederick A. Elsasser, architect, has announced the removal of his office from Falls Building, Morris Ave., to Settlers Bldg., 1000 Stuyvesant Ave., Union, N. J.

#### LAW AND LEGISLATION

♦ The question of Bible reading in the public schools is under consideration in the state of Washington. The state board of education which has been petitioned to order the reading of the Bible in the schools has called a hearing on the subject. "In my judgment the petition means nothing because it is inapplicable," said Dr. N. D. Showalter, state superintendent of public schools. "The attorney general has held several times that the use of the Bible in any way in our schools is contrary to the state constitution. In view of that ruling the state board of education has no jurisdiction in the matter."

♦ The attorney general of Ohio has rendered an opinion to the effect that a probate judge may write insurance on public schools, provided the premium does not exceed \$50 on any one policy. The opinion pointed out that, owing to a prohibition against a county officer being interested in a contract for the purchase of fire insurance for the use of the county with which he is connected, he may not write or renew policies of fire insurance on the county children's home and county home of his county.



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### RUMBLINGS

(Concluded from Page 57)

western city, carrying banners of protest. They called themselves the Young Pioneers of America, and from their banners it was evident that they were sponsored by Communists. They filed into the spacious corridor of the city hall and demanded the presence of the mayor. They were guided and directed by adults, men and women, who had all the earmarks of aliens and soviet adherents. After they had left the building, a number of deputies, stationed along the sidewalk, threw handfuls of pennies into the street. The boys left the ranks, contrary to the commands of their adult guardians, and fought for possession of the money. In the confusion that followed, the parade was disbanded.

This same organization that sponsored this public demonstration of protest, is gaining strength slowly but surely among the youth of the country, and its young members soon become thorough Communists in the small. One of the members, supported by the organization, parents, and friends, defied the school board of a mid-west city, and, although he lost the case, the organization claimed a moral victory.

The doctrines of Communism find fertile soil when times are hard. Men out of work and hungry are quick to criticize and blame the government for their condition. It is during these times of stress that paid agitators sow the seeds of Communism. The advent of good times with steady jobs and good pay usually tempers dissatisfactions, and hampers the destructive work of these agitators. But when these same disturbers, during hard times, turn their attention and their efforts to the sons of men out of work, on the plea that they want to help them avoid the same fate as their fathers, then America should act quickly. This type of boy is easily impressed. He has listened, perchance, night after night to the bitter complainings of a father

who is out of work, short of funds, and unable to care properly for his family; and in the boy's heart there smolder the embers of hate against the government that permits such conditions to arise in a land of wealth and plenty. The fiery words of a Communist will fan these smoldering embers to a fire that soon will turn the little patriotism he may have into a bitter hatred.

It is difficult to blame the boy in this case if he becomes a rabid Communist. He has been forced by existing home conditions and circumstances to assume his present attitude toward capital and government. His antagonism has reached the danger mark, aggravated by the onslaught of hunger and poverty. He has sworn in his heart to oppose a government that has allowed want and suffering to enter his home. He reads with avidity the shortcomings and scandals in government circles, and these unfortunate events become magnified in his mind and assume alarming proportions.

I do not propose to offer a panacea for these problems and could not if I tried. I merely state the problems as they arose in the classroom. Thousands of high-school teachers have found the same situations, and perchance many of them are dealing with boys of this type and are finding it extremely difficult and, in many cases, impossible to develop patriotism in them.

The problem, no doubt, is to be solved by the government itself. Hard times are certain to arise. Our financial and industrial structures are not free from the elements of failure. But a national calamity, like the Wall Street cataclysm of October, 1929, is unpardonable. Government intervention should have checked the wholesale "boosting" and watering of wildcat stock. A large percentage of America was gambling on 'change; money was diverted from the natural channels of legitimate business and commerce, and poured in hundreds of millions into the steel-bound coffers of Wall Street's

chosen few. A crash was inevitable. The result: industry suffered a terrible blow; men were thrown out of work; suffering and privation followed; and Communism found fertile soil in the minds of disgruntled workers and in the impressionable minds of youths whose fathers wanted to work but could not buy a job.

### OLD AND NEW PRINCIPLES OF SALARY SCHEDULE MAKING

(Concluded from Page 44)

single salary schedule could not be financed without reducing the maximum salary of high-school teachers, which procedure could not be justified. The new schedule makes no differentiation as to any qualifications other than those that are professional in nature.

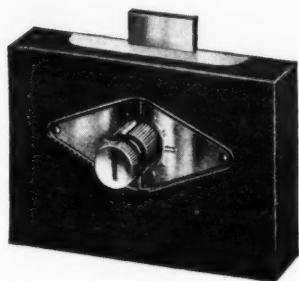
It is impracticable to present a discussion of several minor provisions included in the schedule. It might be added, however, that it is anticipated that the new schedule can be financed without enlarging the budget beyond what has been contemplated as justifiable normal expansion. While the efficacy of the schedule will be determined only through its operation over a period of years, its unanimous approval by all concerned insures a favorable attitude toward giving it a thorough trial.

♦ Supt. William J. O'Shea, of New York City, has called the attention of principals in the city schools to the need of a fire drill test, to determine whether teachers, pupils, and custodians know their respective duties in the event of an emergency dismissal. In a letter to the principals, Superintendent O'Shea called attention to the board's rules on fire drills and to the fire-drill placards which have been distributed in all the schools.

♦ Three new district superintendencies are to be created by the New York City board of education during the next year, with salaries of \$10,000 each. The new officials will not be assigned to field duties, but will have charge of administrative work.



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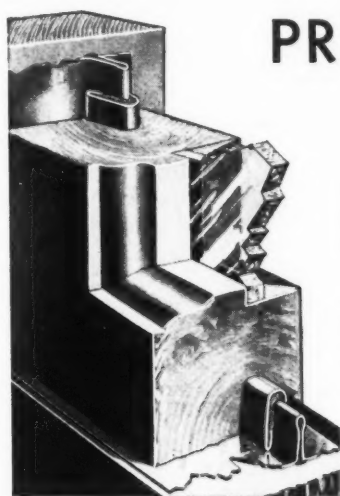
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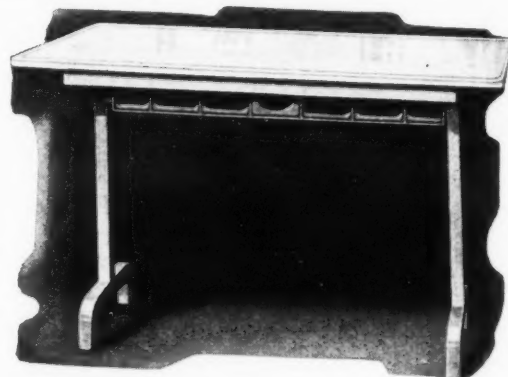
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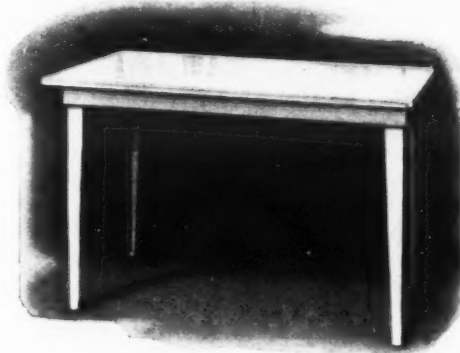
**Metal Base  
Table No. 308**

Base is of cast iron, in colored or white porcelain enamel, dull plate finish, white paint, verde antique or black japan. Tops may be your choice of Sani-Onyx, Linoleum, Rub-Tex or Molded Rubber in a wide range of colors.



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A simple, sturdy, massive design that comes in a number of different sizes. Legs are attractively fluted. Tops may be Sani-Onyx, in white, ivory, black, gray or green Linoleum in single or two-tone and many colors of Rub-Tex or Molded Rubber.



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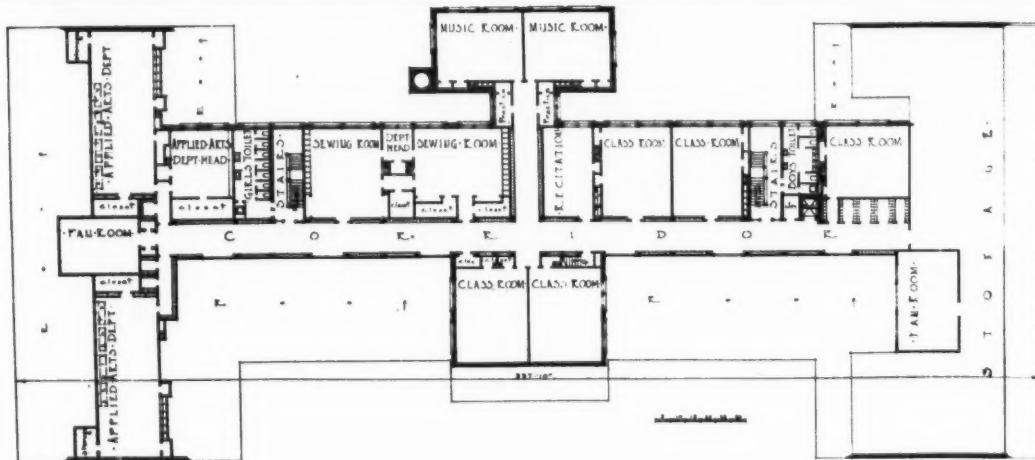
ings, the music scale . . . all these important daily tasks need be done only once. This is the teacher's own blackboard which she can use for exhibition work . . . for problem project system . . . for flashing work on the students. She can lock its pages and so give the same examination to several divisions. This huge book of slate leaves, is the equivalent in space to blackboard across the entire front of the average room . . . yet it eliminates glare. It prevents eyestrain.

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Monahan and Meikle, Architects, Pawtucket, Rhode Island

### WHITTIER'S SUCCESSFUL SCHOOL CAFETERIA

(Concluded from Page 110)

sweets, or fats and that pastry, pickles, white bread, doughnuts, fried foods, tea, coffee, vinegar, pepper, and other condiments are injurious. Pies are not served. Tea and coffee are made to supply an occasional call from grown-ups, but they are not offered to the children. A determined effort is made to correct wrong eating habits. "Why, Johnny, you've taken three starches," Mrs. Miller will remind a child who has taken upon his tray potatoes, macaroni, and blanc mange. "Better take some protein instead of so much starch."

#### Serving Soups and Vegetables

The serving of bread and butter separately has been discontinued, because few children care to bother with combining the two. Instead,

bread-and-butter sandwiches, with lettuce, are supplied. No cold-meat sandwiches are prepared, but occasionally hot-roast-beef sandwiches with gravy, are served for 10 cents. Most dishes bring 5 cents, although a few, stuffed sweet peppers and meatloaf, bring 8 cents.

Hot vegetable soup is a menu mainstay. This dish has received much favorable comment from mothers, many of whom are using the school recipe in their own homes. Instead of pot liquor from boiled meat, water from potatoes boiled for mashing is enriched with butter and used for soup stock.

Salads are seasoned with lemon juice, instead of vinegar. Little salt is used, and the sweetening of cereal mush is condemned. Where practicable, honey is substituted for sugar, and the use of the latter is discouraged. Ice cream and a few good candies, such as chocolate bars, are sold.

#### Some Attractive Dishes

Tomatoes, corn, and peas are the only canned vegetables served. Cabbage is never boiled, but eaten raw. Mineral water is considered injurious. Much milk is served, also mild fruit juices. Considerable fruit is canned by the cooking classes and stored in the pantry for winter use.

A simple cake, containing little grease or sugar, is served to the children. Fruit and cream pudding and raw fruit desserts are common dishes. Baked apples and stewed unsweetened prunes also are served. Spaghetti, with tomatoes and shredded carrots, is a popular dish. A sort of a tamale is made of cornmeal mush, leftover roast meat, and vegetables, combined and baked. Raw tomatoes are served with the stem scooped out and filled with dressing.

Attractive names are given dishes. A favorite with the little folks is "pig-in-the-blanket," made of bran biscuit, stuffed with cooked vegetables and a little meat. "Beauty salad" is composed of raw cabbage and vegetables, ground together, and served on lettuce leaves.

### THE PAWTUCKET SENIOR HIGH SCHOOL, PAWTUCKET, R. I.

(Concluded from Page 56)

board, special cupboards, drawers, and board racks, and sinks are built into recesses in the walls. The drawing tables, with adjustable tops, accommodate two pupils each.

The building was erected at a total cost of \$1,700,000, which was divided as follows: Cost of general construction, \$1,025,000; cost of heating, \$70,000; cost of electrical equipment, \$85,650; cost of plumbing, \$45,718; cost of painting, \$69,783.

The building was planned and erected under the supervision of Messrs. Monahan and Meikle, architects, who also gave the two oil paintings placed on the walls at both ends of the stage proscenium in the auditorium.



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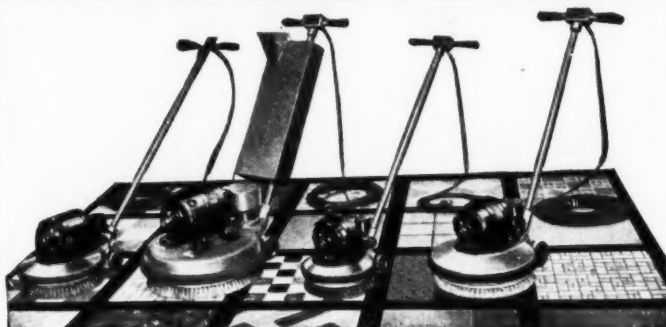
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### THE OLD WASHINGTON SCHOOL OF ALEXANDRIA, VIRGINIA

(Continued from Page 40)

rounding country. The old Alexandria Academy, a flourishing private school of a type common at the time, took care of the educational needs of boys whose parents could pay the tuition charges. For the poor boys there was no school.

Washington requested the trustees of the academy to make provisions for free instruction for orphans and other children unable to pay the academy charges, promising a gift of \$5,000 at his death, and during his life an annual donation of about \$250. The trustees accepted the offer. The money was paid by Washington regularly for 14 years, till his death, when the trustees received \$5,000 from the estate. They purchased this house which was adjacent to the academy, made the necessary alterations, and conducted the school as a free school until the academy itself was made free and supported by the city of Alexandria. Even then the old academy building could not take care of all of the children, so the old Washington School was continued in use, to house the overflow from the other building.

The academy building was replaced by a new building in 1812. This new building was of considerable interest from the standpoint of the history of education in the United States. It was one of the few "Lancasterian Schools" of the country. In 1888, when this building gave place again to a new structure, the one now in use, the stone lintel over the main entrance was placed over the door of the new building. On it are the words "Alexandria Lancasterian School, 1812." This has deceived many into thinking that the present building was the Lancasterian school.

The new highway to Mt. Vernon will be completed in 1932, when the 200th anniversary of

the birth of Washington is celebrated. On it will be marked the points of interest relative to the first president. This Old Washington School will stand out as a living indication of Washington's well-known belief in the need of universal education for the poor as well as for the rich. A tablet on the roadside will call attention to the school.

### TEAMWORK IN THE RUNNING OF AN ELEMENTARY SCHOOL

(Continued from Page 39)

#### B. Conferences with and Helps to Individual Teachers.

1. A private conference should be held with a teacher as soon as possible after visiting her class in which all details of the class should be frankly discussed. Criticism should be, of course, encouraging and should express itself in terms of educational principles and should avoid as far as possible the personal element.

2. Principals should be ready and willing to confer with teachers who seek help on individual teaching problems.

3. Teachers desire help and advice concerning schools to visit, extension summer courses, and various educational opportunities. Principals should be prepared to give this type of assistance.

4. Round-table discussions conducted by the principal to discuss methods and means of improving instruction would greatly assist teachers.

5. The principal has a particular responsibility in supervising the work of a new teacher in the building to assure her of the right start.

#### V. The Teacher's Responsibility in the Program of Supervision.

A. The teacher should welcome supervision, with mind alert and open to suggestions for improvement and a sincere desire to develop. Her mere presence in the profession demands that she give loyal support and cooperate in all

school affairs and in any teaching undertaking whether initiated by the supervisor or principal.

B. Work carefully planned in accordance with the program outlined is made more effective by use of the teacher's own initiation in perfecting details, in classroom organization and administration, and in the use of materials and equipment.

C. Each teacher should feel free to consult her principal or supervisor regarding her problems, and she should feel certain of receiving expert and effective help as a result of these conferences. In case of any problem disagreement it is her responsibility to consult first with her principal before consulting anyone else.

D. The contributions of teachers in suggestions for improving methods, in determining policies of the schools and ways of making existing policies more effective are of value. The good teacher makes such contributions through the proper channels of supervision.

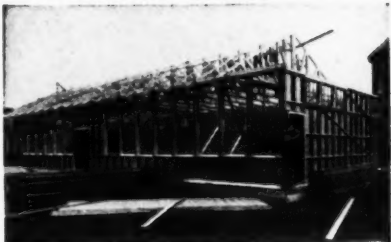
E. Criticism from principal and supervisor of the work of a teacher, teachers' meetings, objective evidence to show accomplishment and to point at needs, are all devices for improving teaching and should be so considered by teachers.

Fair play requires that teachers while being supervised should try to maintain as normal an attitude in class as possible. Talented pupils should not be exhibited to create a favorable impression.

All these comments of teachers indicate thoughtful consideration of the problems involved in the running of an elementary school. They show much more pointedly than would the comments of a group of supervisory officers that administrative efficiency and high executive ability are not enough. These qualities in a principal may result in a perfectly running machine, where everything moves with perfect mechanical and impersonal precision. But, a school

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### FIRE INSURANCE FOR SCHOOL PROPERTY

The status of the fire insurance as applied to school property throughout the United States is the basis of a study recently made by the National Association of Public-School Business Officials. The study deals primarily with practices indicating methods of protection against fire hazards, and also with the experiences accrued. The report is somewhat fragmentary in character and frankly states that it attempts no conclusions and submits no recommendations.

The report, however, is instructive so far as it goes. It seeks to show the difference in the losses sustained by so-called resistive and non-resistive construction. The questionnaire sent out by the committee brought only 60-odd replies, but these noted the fact that the fire losses were five times greater where school buildings were of ordinary construction.

#### Self Insurance of School Property

Perhaps the most valuable part of the report is the part dealing with the subject of self insurance. The report explains that:

"By self insurance is meant the assumption by the owner of any losses that may occur through fire. In the case of school property these losses are sometimes met by drawing upon a fund gathered through setting aside a certain sum of money for that purpose each year. In other cities, school districts set aside no fund, but losses are paid for by current taxation or bonding for a new building in place of the one

destroyed. In either case, the community assumes the entire risk of loss of school property through fire.

"Two factors should be taken into consideration before a community should attempt to practice self insurance. The first of these is that the community have a sufficiently large number of buildings to warrant self insurance. Obviously, a district with a small number of school buildings cannot afford to practice self insurance because the destruction of any one building will cause too great a drain on its financial resources.

"If, on the other hand, there are a large number of school buildings in the city and new ones are being constructed annually, the probable loss to the city by fire in any one of them will be relatively small and can easily be met. The second of these factors is that of the spread of the risks. This means that the buildings should be located at such distances from each other that fire in any one of them would not endanger other school property.

"The first of these factors makes self insurance dependent upon the size of the community and operates to prevent small cities from practicing self insurance. The second of them very seldom proves a handicap in the adoption of self insurance because if the city or community is large enough for the law of averages to apply, the school buildings will be quite widely scattered in order to accommodate children living in the various sections of the city.

"If the community under consideration is large enough for the law of averages to apply, the question of self insurance as regards school buildings becomes one of economy. That is, will it prove cheaper, over a period of years, for the community to carry its own insurance than to insure with fire-insurance companies? There are two types of existing political units in the

United States where self insurance of school buildings has been tried. They are the large cities and the states themselves."

#### Self Insurance by City School Districts

A number of school districts of the larger cities in the United States carry their own fire insurance. A report on school fire insurance, compiled by the board of education of Flint, Michigan, under date of May 1, 1926, contains the names of the following cities as carrying their own fire insurance and lists the approximate value of school property in these cities as shown below:

Among the cities carrying their own insurance are:

| City                       | Value of School Property |
|----------------------------|--------------------------|
| Chicago, Ill. ....         | \$ 300,000,000           |
| Philadelphia, Pa. ....     | 65,000,000               |
| Detroit, Mich. ....        | 49,100,000               |
| Boston, Mass. ....         | 30,000,000               |
| San Francisco, Calif. .... | 25,000,000               |
| Kansas City, Mo. ....      | 23,500,000               |
| Rochester, N. Y. ....      | 20,000,000               |
| Seattle, Wash. ....        | 12,000,000               |
| Grand Rapids, Mich. ....   | 10,000,000               |
| Flint, Mich. ....          | 9,000,000                |
| Worcester, Mass. ....      | 8,746,948                |
| Providence, R. I. ....     | 8,500,000                |
| Springfield, Mass. ....    | 7,250,117                |
| Cambridge, Mass. ....      | 3,761,598                |
| Davenport, Iowa ....       | 3,407,920                |

The report suggests that the fundamental factor of insurance for school properties is the same as in business—getting complete and adequate protection at the lowest possible cost. Savings in fire-insurance rates for public buildings can be made just as easily and effectively as for industrial and business properties.

The report is accompanied by a bibliography on the subject of school property insurance which includes 34 publications. In this list the AMERICAN SCHOOL BOARD JOURNAL is referred to 11 times.



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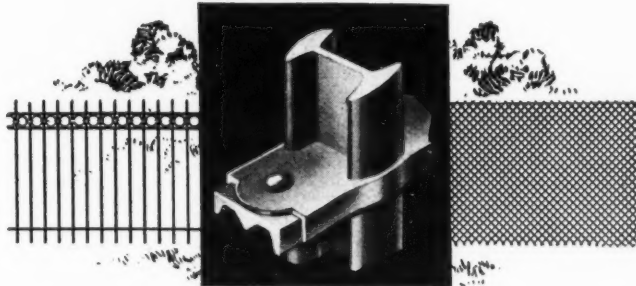
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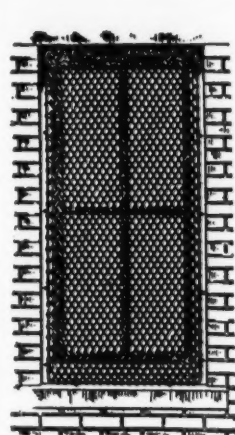
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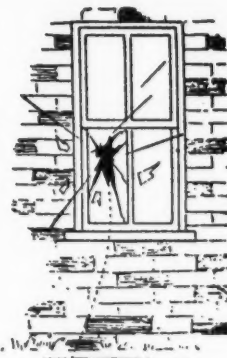
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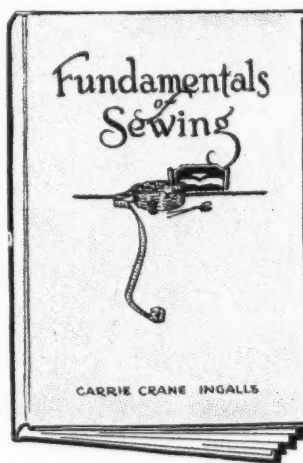
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*Descriptive literature  
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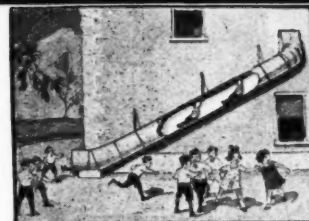
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1858 Conway Bldg., Chicago, Ill.

## NATURAL AND ARTIFICIAL LIGHTING OF SCHOOL- ROOMS

(Concluded from Page 42)

or equals of the provisions of the statutory building code, and has been of considerable assistance in all state building matters since its creation a few years ago.

The following rule just issued by the Ohio Board of Building Standards attempts to state what combination of natural and artificial light is the equal of window glass area proportioned by the statutory law. This rule which was first tentatively issued in the form of 1 to 8 for glass ratio reads as follows in its final form:

### RULE No. 11

Whenever class, study, recitation, school, and laboratory rooms shall be built with the windows at least 100 feet away from the nearest wall or property line, then the ratio of one (1) square foot of glass area to each six and one-half ( $6\frac{1}{2}$ ) square feet of floor area, with the glass area figured above thirty-six (36) inches from the floor, together with artificial lighting which will produce eight (8) foot candles illumination on the top of all desks in the room without the aid of natural lighting, is hereby declared to be the equivalent as regards safety and sanitation of the requirements of Section 12600-54 G.C.

This ruling is subject to criticism in respect to lack of clear definition regarding location of walls that may adjoin and be at right angles to the window plane, assuming that it is necessary to mention anything about walls and also in respect to the amount of light intensity on desk tops. The following would appear to be a more logical way to express the matter, the artificial illumination being made to agree with perfectly good lighting standards as established and proved satisfactory in the Cleveland school system.

### An Improved Rule Suggested

Whenever artificial illumination is added to a class, study, recitation, school, or laboratory room by using one luminaire for each one hundred and forty (140) square feet of room floor area, or fraction thereof, and when each luminaire is equipped with an electric lamp or other equivalent light source, enclosed in a white glass globe, giving off not less than two thousand two hundred (2,200) lumens, or using not less than one hundred and fifty (150) watts of electricity, then the ratio of one (1) square foot of net exterior glass area to six and one-half ( $6\frac{1}{2}$ ) square feet of the room floor area, with the glass area figured above thirty-six (36) inches from the floor, is hereby declared to be equivalent as regards safety and sanitation of the requirements of that part of Section 12600-54 G.C. which pertains to the above locations.

In conclusion the writer would recommend against other states accepting as an example any rule as correct on this matter without very careful consideration.

The principle of combining natural and artificial light and reducing the amount of window glass area is a dangerous one unless handled with sound judgment, and while it is good for architecture and the electric light companies, yet it may prove expensive to taxpayers if carried too far.

### THE FACULTY HELPS THE PRINCIPAL

(Continued from Page 47)

him. They often see those weaknesses which interfere with his going forward. Occasionally a friend in the group may give him kindly hints which may or may not be recognized. In this particular high school, with a staff of 87 people, the principal appointed a committee of three high-minded, professional teachers who had the confidence and respect of their fellow workers to devise a scheme whereby the principal could see himself from the point of view of his faculty.

This committee read and gave much thought to the problem. Without informing the teachers of the particular purpose they had in mind, the committee secured informally from each teacher a statement of the qualities they thought an effective principal should have. From this information the committee members worked out a rating scale.

Later, at one of the faculty meetings the principal made a statement that it was always difficult for one to see himself as others see him and that he was asking the help of the entire staff in correcting this defect by carefully, honestly, and frankly filling out the rating sheet prepared by the committee. The scale was passed out and without any discussion the rating was given by each teacher. The committee which made up the rating sheet collected the replies, tallied them, and after having destroyed the originals turned the summarized results over to the principal.

In the summary he saw himself from the point of view of his fellow workers. He was not aware of some of the weaknesses indicated. He discounted the few extreme expressions, for he knew that there would be a few teachers who would be biased either one way or the other; that is, a few who thought he was all wrong and the few who thought he was perfect.

The features of this scale are:

1. The scale was made out by representative teachers from the teacher point of view.
2. Each teacher's rating was absolutely confidential.
3. No opportunity was given for discussion before the rating, so that no one teacher's opinion affected another's so far as the immediate rating went.
4. This information was used only by the principal, for, outside of the tabulating committee, no one saw the results of the tabulations.

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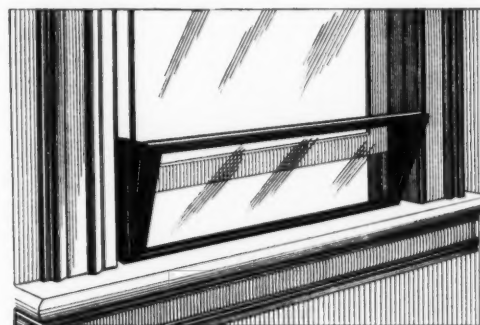
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One may point out that teachers have not the experience and the background to judge a principal's work. However, the success of a principal's professional program depends in large measure on what his teachers think of him, for how they coöperate with him depends on this. The scale is only intended to show the principal how his teachers size him up.

This scale was not alone tried out and found helpful by the high-school principal, but some twelve elementary principals in the same school system tried it out. Some felt that it was very helpful in putting them straight, whereas others felt deeply hurt, for, no doubt, they had to face a truthful picture of themselves for the first time in their lives. A few felt that they learned nothing new. On the whole, it was well received.

#### RED TAPE IN EDUCATION

(Concluded from Page 48)

out old problems along routine lines? If he does, he is a bad risk for a directing position of any kind, for under any but the most favorable circumstances he is likely to become a red-tape operator when given administrative responsibility. In selecting managers, then, we need a test of intelligence as applied in the formulation and solution of new problems.

The training program of a prospective director of action, therefore, should be organized around the solution of problems. Mere acquisition of information or skill for its own sake is consequently a dangerous practice. To teach a mass of facts without clearly relating them to a purpose, or a set of devices without a definite aim, is a good way to produce red-tape operators.

The training of administrators should include liberal provisions for the questioning of authority and the challenging of precedent, for it is through too much respect for what has been

done before that red tape is developed. The usual lecture-examination and textbook-recitation systems of instruction need to be handled with due regard for their possible dangers in this respect.

#### In Summary

The essential characteristic of red tape is a psychological mark. It is found in the mind of every individual who allows a regard for tools, instruments, devices, methods, or procedures to outweigh the objective of his service. *Red tape is regulation-centered.* To discover it we must observe the operator himself as well as the system which he administers.

Does the individual concentrate on rules and still hold his objectives of service firmly in mind? If so, he is an administrator — efficient according to the measure of his ability and training — but he is not a red-tape operator. Does he neglect both rules and objectives? If so, he is a muddler, unworthy of consideration no matter what his position or preparation may be, but he cannot justly be charged with the practice of red tape. Does he forget rules of procedure but remember objectives? If so, he may be a theorist whose contributions are possibly of some value to his fellow workers, but he is neither a director of action nor a red tapist. Does he center on rules and forget, ignore, or never recognize objectives of service? If, so, he is guilty of red tape, whatever his field of activity may be.

#### SAWING WOOD

(Concluded from Page 59)

One superintendent of the writer's acquaintance lost his position last spring because, as his friends say, he did too much farming. And another got into the habit of preaching in the community and then had to leave. Still another chased after social affairs, dances, etc., until he was asked to resign.

It is essential that administrators maintain community contacts. But, isn't there danger of going too far with it? May superintendents and principals not do so many things for the community that there is no time left in which to attend to their jobs?

Are some superintendents attending too many educational meetings, leaving the schools too often to run themselves? These meetings are very necessary, but isn't there a danger of taking in too many of them? In the northcentral states, a superintendent can spend most of his time in chasing meetings. One superintendent was "let out" by his board while he was attending the meeting of the Department of Superintendence of the N. E. A., held in another section of the country. The action of the board was certainly unfair, but it is quite likely that the members were rightly aroused by the frequent absence of members of the executive school staff.

May it not be well for school executives to pay particular attention just now to the old-fashioned occupation of sawing wood?

#### RIGHT OF PERSONS ADVANCING MONEY FOR SCHOOL BUILDING TO REIMBURSEMENT

(Concluded from Page 36)

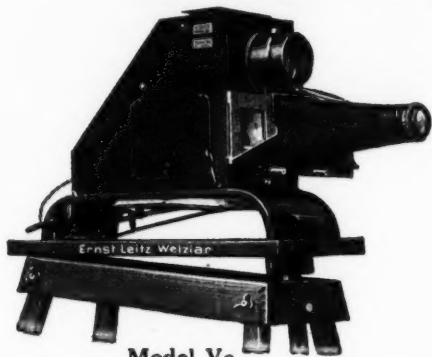
For while, by the weight of judicial authority in the states where this question has been squarely raised, to name a few, Pennsylvania, Georgia, Indiana, and Rhode Island, the right to reimbursement has been upheld, the appellate courts of many states have never had the question presented. And certainly, the case from Missouri reviewed squarely and on sound reason denies the right. So, common business prudence would seem to dictate the making of loans or advancements of this character only upon sound legal advice, relative to the right of subsequent enforcement of such claims against the school district benefited thereby.



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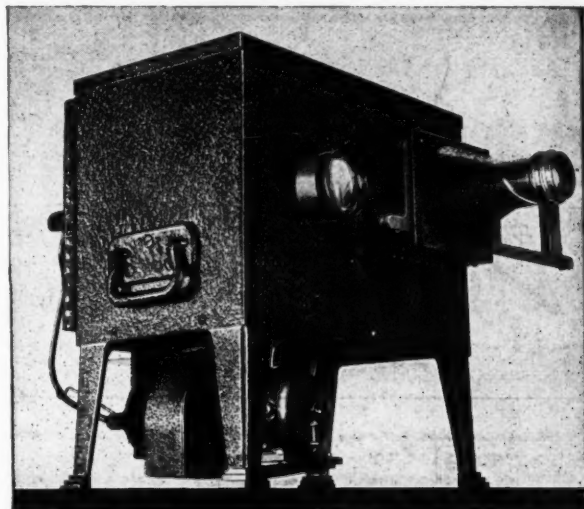
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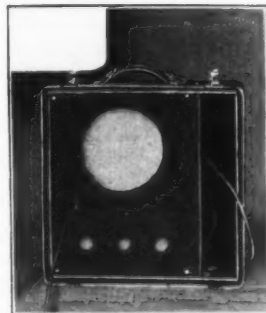
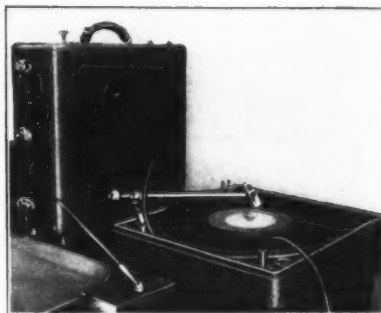
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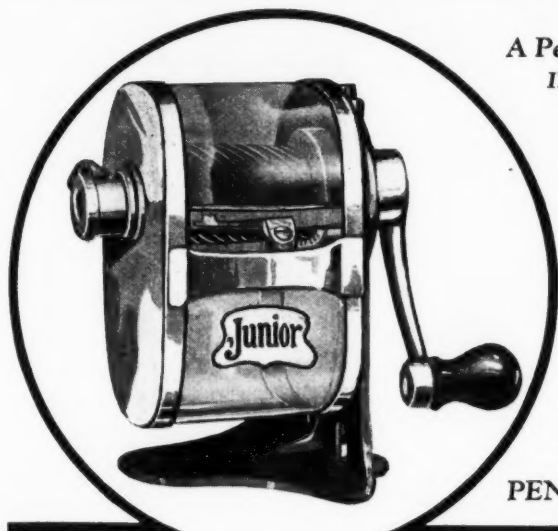
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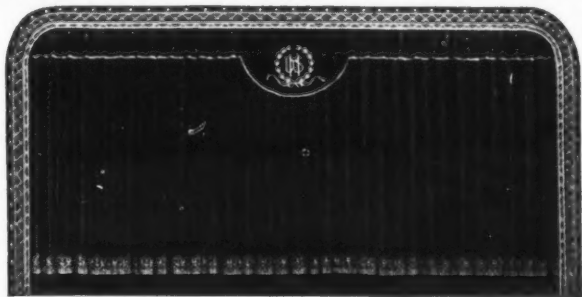
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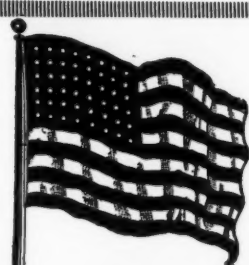
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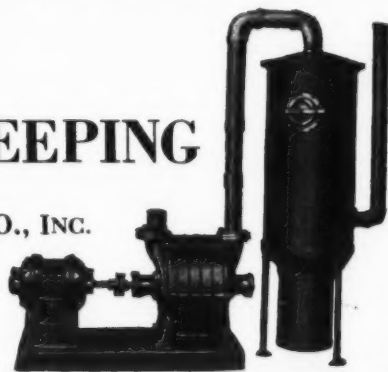
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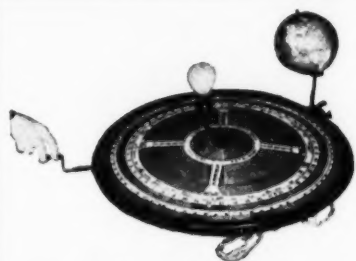
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Children should be kept in the school yard. Their lives are endangered on the streets. When they are in the school yard, the air is full of footballs, baseballs, snowballs, as the season dictates. Then the Windows suffer. Audubon wire enclosures and window guards will protect children and guard windows efficiently and economically. Write for complete information.

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Audubon, New Jersey

## AROUSE INTEREST

Just What You Have Wanted!

SPELLING AWARDS  
AWARDS OF MERIT  
ATHLETIC CERTIFICATES  
LIBRARY AWARDS  
beautifully lithographed

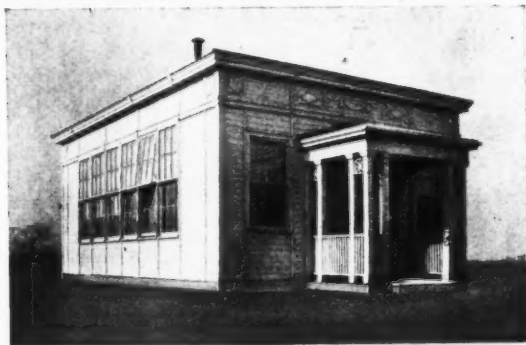
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**METROPOLITAN SUPPLY CO.**  
CEDAR RAPIDS, IOWA

• MAINTAIN DESIRE •

• STIR IMAGINATION •

## AMERICAN PORTABLE SCHOOLS



### WINDOWS AUSTRAL

used in these  
modern school  
buildings make  
healthful, com-  
fortable class-  
rooms — fresh  
air without  
draft.

**American Portable House Corporation**  
601-611 Alaska St., Seattle, Wash.

Representatives in:

Chicago; Cincinnati; Easton, Pa.; St. Louis; Painesville, O.; Richmond, Va.;  
Charleston, W. Va.; Brooklyn; Waynesburg, Pa.; Terre Haute, Ind.

# STAGE EQUIPMENT

Since 1869

**Volland Scenic Studios, Inc.**

3729-37 Cass Avenue

St. Louis, Mo.

Jackson Proscenium Curtain No. 26

## AMESBURY HIGH SCHOOL

BUILDING COMMITTEE

AUGUSTUS N. PARRY CHAIRMAN

MARTIN F. CONNELLY SECRETARY WILLIAM E. BIDDLE

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GEORGE A. MERRILL EARL M. NELSON

PRESCOTT & SIDEBOTTOM ARCHITECTS

KENNEDY & PETERSON CONSTRUCTION CO. BUILDERS

THIS BUILDING ERECTED 1917

**HONOR ROLLS—MEMORIAL TABLETS—IN BRONZE**

MODELED, CAST AND FINISHED BY

**ALBERT RUSSELL AND SONS CO.**

125 MERRIMACK ST.

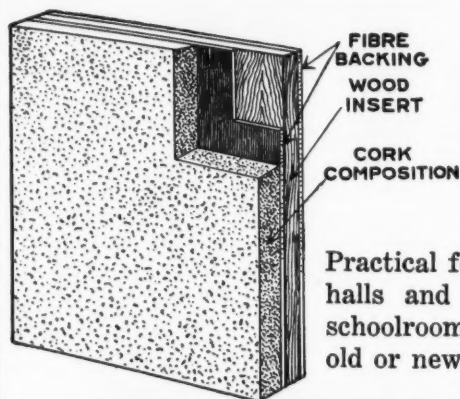
NEWBURYPORT, MASS.

### Beautiful - Practical - Economical

The stage curtain is the most conspicuous object in the school auditorium. In the beauty of fabric and finish our proscenium curtains satisfy the most exacting observer, and their correct construction assures perfect operation.

**A. P. JACKSON CORP.,** HERKIMER, N. Y.





### "STANDARD" CORK Bulletin Board

THE BEST  
BY  
ANY TEST

Practical for display purposes in halls and over blackboards in schoolrooms. Easily installed in old or new buildings.

USEFUL, ATTRACTIVE and PERMANENT  
We Manufacture All Sizes. Write for Sample.

**STANDARD BLACKBOARD CO.**  
Cor. Second and Walnut Sts. ST. LOUIS, MO.

## SCENERY

COMPLETE  
STAGE EQUIPMENT

Velour Curtains — Cycloramas  
Draperies

"IF IT'S USED ON A STAGE—WE CAN FURNISH IT"

**ACME SCENIC STUDIOS**

2919-21 W. Van Buren St. Chicago, Ill.

### THE AUTOMATIC LOCKING "SUPER SPECIAL" KEYLESS PADLOCK

The "Super Special" is produced and offered as an advanced locking device developed to assist especially in reducing or eliminating administrative effort and expense in connection with the larger locker installations in Schools.



Cut about 1/4  
actual size

A rugged, durable, economical padlock, practically fool-proof—cannot be left unlocked because the combination is completely thrown off when the shackle is snapped shut.

"Super Specials" are the result of extended specialized experience and are made up special for installations, on individualized combinations, to meet requirements. Liberal guarantee and permanent Supplementary Record of Combinations are part of our service.

Sample and Special Proposition to  
Operating Officials of Schools - on request

**THE J. B. MILLER KEYLESS LOCK COMPANY**  
KENT, OHIO - - - - - U. S. A.

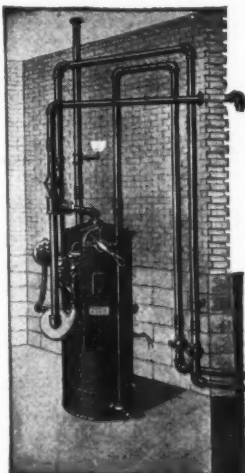
### ELECTRICALLY OPERATED, AUTOMATIC GAS MACHINE Requires No Attention

Write to us for list of colleges and high schools using our machine. Illustrated Catalogue Will Be Sent on Request.

**MATTHEWS GAS MACHINE CO.**  
6 E. Lake Street CHICAGO, ILL.

This Machine Will  
Automatically  
Produce  
GAS

For your laboratories and Domestic Science Department. In use in hundreds of educational institutions throughout the country.



### "OBCO" STEEL FLAG POLES

They are storm and lightning proof, smooth and straight, last a lifetime, cost less than wood poles.

Our flag poles are constructed of steel pipe sections, telescoping into each other and held in place with steel pins, thereby making a tight and rigid joint.

Erection is very simple, and with the full directions furnished by us anyone can do it.

WRITE FOR CIRCULAR AND PRICES.

**OTTO BIEFELD COMPANY**

118 - 206 N. Water St. Watertown, Wisconsin



Forse Wear-Proof Shades Are Made  
in Ten Popular Styles.

FORSE CO., 500 Long St.  
Anderson, Indiana

### FORSE WEAR-PROOF

WINDOW SHADES FOR SCHOOLS

The famous soft-finish, rich-looking durable tan fabric with and without adjustable features. Perfect light and air control. The only shade with life-time guarantee. Lasts as long as the building. Forse Duo-Roll Shades are used in America's modern schools. Samples and catalogue free. Ten styles—all wear-proof.

### SCHOOL MAN WANTED

Write orders in spare time for Wear-Proof window shades; used in hundreds of America's finest schools and other buildings. Good opportunity if your county open. Particulars free.

Forse Company 500 Long St. Anderson, Ind.

### SILICATE BLACK BOARDS

SILICATE VENEER PLATE  
BLACK BOARD

Made of the best material thoroughly seasoned—Framed or Unframed—All Frames are Oak Finished. U. S. Government Contracts and New York City Board of Education Specifications for 40 Years.

#### CORK BULLETIN BOARDS

Framed or Unframed Sizes 18 x 24 inches  
Frames are Oak Finished to 4 x 6 feet.

Dealers write for catalogue.

**N. Y. SILICATE BOOK SLATE COMPANY**  
20 VESEY STREET NEW YORK CITY

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**TIFFIN**  
Scenic Studios  
TIFFIN, OHIO

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# Directory of Equipment and Supplies

## ACOUSTICAL TREATMENT

Celotex Company, The  
Johns-Manville Corp.  
U. S. Gypsum Co.

## ADJUSTABLE WINDOW SHADES

Athy Company, The  
Draper Shade Co., L. O.  
Forse Manufacturing Co.  
Maxwell & Co., Inc., S. A.  
Rowles Co., E. W. A.

## AIR CONDITIONING

American Air Filter Company, Inc.  
American Blower Company  
Buckeye Blower Company  
Nelson Corporation, The Herman  
Peerless Unit Ventilation Co., Inc.  
Sturtevant Co., B. F.

## AIR FILTERS

American Air Filter Co., Inc.

## AIR WASHERS

American Air Filter Company, Inc.  
American Blower Company  
Sturtevant Company, B. F.

## ARCHITECTS

(See Schoolhouse Architects' Directory)

## ASH HOISTS

Gillis & Geoghegan

## AUDITORIUM DRAPERIES

Volland Scenic Studios

## AUDITORIUM SEATING

American Seating Company  
Heywood-Wakefield Co.  
Kundt Company, The Theodor  
Mahoney Chair Company  
National School Equipment Co.  
Peabody Seating Co.  
Rowles Co., E. W. A.  
Standard Mfg. Company  
Welch Company, W. M.

## AUTOMATIC TELEPHONE SYSTEMS

Automatic Electric, Inc.  
North Electric Mfg. Company, The

## BASEMENT WINDOWS—STEEL

Detroit Steel Products Company  
Truscon Steel Company

## BIOLOGICAL SUPPLIES

Welch Mfg. Company, W. M.

## BLACKBOARD CLEANERS

Beckley-Cardy Company  
Eagle Soap Corporation  
Midland Chemical Laboratories  
Oakite Products, Inc.

## BLACKBOARDS—MANUFACTURED

Beckley-Cardy Company  
N. Y. Silicate Book Slate Co.  
Rowles Co., E. W. A.

## BLACKBOARDS—SLATE

Natural Slate Blackboard Co.  
Rowles Co., E. W. A.

## BLEACHERS

Circle A Products Corp.  
Minter Homes Corporation  
Pittsburgh-Des Moines Steel Co.  
Universal Equipment Co.

## BOILERS

Heggie Simplex Boiler Company  
Kewanee Boiler Company

## BOILER COMPOUNDS

Eagle Soap Corporation  
Midland Chemical Laboratories

## BOOK CASES

Peterson & Company, Leonard  
Remington-Rand Business Service, Inc.  
Welch Manufacturing Company, W. M.

## BOOK COVERS

Holden Patent Book Cover Co.  
Iroquois Publishing Company

## BOOKKEEPING MACHINES

Remington-Rand Business Service, Inc.

## BOOK PUBLISHERS

American Book Company  
Beckley-Cardy Company  
Bruce Publishing Co.

## BRUSHES

Eagle Soap Corporation  
Midland Chemical Laboratories

## BUILDING MATERIALS

Asbestos Buildings Company  
Celotex Company, The  
Common Brick Mfrs. Ass'n, The  
Detroit Steel Products Company  
Johns-Manville Corp.

## BOX LOCKERS (STEEL)

Durabilt Steel Locker Co.

## BRONZE TABLETS

Russell & Sons Co., Albert

## BRONZE TABLETS, SIGNS, LETTERS

Russell & Sons Co., Albert

## BRUSHES

Eagle Soap Corporation  
Midland Chemical Laboratories

## BUILDING MATERIALS

Asbestos Buildings Company  
Celotex Company, The  
Common Brick Mfrs. Ass'n, The  
Detroit Steel Products Company  
Johns-Manville Corp.

## BULLETIN BOARDS

Beckley-Cardy Company  
N. Y. Silicate Book Slate Co.  
Paddock Cork Co.

## BUS BODIES

Welch Mfg. Co., W. M.

## BUS BODIES

Welch Mfg. Co., W. M.

## BUSES

Dodge Brothers Corp.

## CABINETS

White Co., The

## CABINETS (STORAGE) (STEEL)

Durabilt Steel Locker Co.

## CABINETS (WARDROBE) (STEEL)

Durabilt Steel Locker Co.

## CAFETERIA EQUIPMENT

Dougherty & Sons, Inc., W. F.  
Rani Products Co., The  
Standard Gas Equipment Corp.

## CANVAS GOODS

Tucker Duck & Rubber Co.

## CHAIRS

Algoma Wood Products Co.  
Beckley-Cardy Company  
Clarin Manufacturing Co.  
Great Northern Chair Co., The  
Maple City Stamping Company  
Peabody Seating Co.  
Royal Metal Mfg. Co.  
Stakmore Company  
Standard School Equipment Co.  
Tucker Duck & Rubber Co.  
Wark-Beacon Steel Furniture Co.  
Welch Mfg. Co., W. M.

## CHAIRS—FOLDING

Clarin Mfg. Company  
Mahoney Chair Company  
Maple City Stamping Company  
Northern Corrugating Co.

## CHALKS

American Crayon Company  
Beckley-Cardy Company  
Binney & Smith Co.

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Beckley-Cardy Company  
Binney & Smith Co.

## ERASERS

Beckley-Cardy Company  
Rowles Co., E. W. A.  
Weber Costello Co.

## ERASER CLEANERS

Weber Costello Company

## FENCES

Anchor Post Fence Company  
Clay Equipment Corp.  
Cyclone Fence Co.

## FILING SYSTEMS

Remington-Rand Business Service, Inc.

## FIRE ALARM SYSTEMS

International Business Machines Corp.  
Standard Electric Time Company

## FIRE ESCAPES

Potter Manufacturing Corp.

## FIRE EXIT LATCHES

Potter Manufacturing Corp.  
Steffens-Amberg Company  
Vonnegut Hardware Co.

## FIRE EXTINGUISHERS

Harker Manufacturing Co.

## FIREPROOF DOORS

Detroit Steel Products Co.  
Truscon Steel Company

## FIRE INSURANCE

Federation of Mutual Fire Insurance Companies  
Home Insurance Company, The

## FIREPROOFING MATERIALS

Asbestos Buildings Company

## FLAGS

Annis & Co.

## FLAG POLES

Blefield & Company, Otto  
Rowles Co., E. W. A.

## FLOOR COVERING

Congoleum-Nairn, Inc.  
Heywood-Wakefield Co.

## FLOOR FINISHES

Churchill Manufacturing Co.  
Continental Chemical Corporation  
Eagle Soap Corporation

## FLOOR FINISHES

Hild Floor Machine Co.  
Midland Chemical Laboratories  
Wis-Co-Lac Co., The

## FLOORING

Carter Bloxonend Flooring Co.  
Congoleum-Nairn, Inc.

## FLOORING COMPOSITION

Congoleum-Nairn, Inc.

## FLOOR SCRUBBING EQUIPMENT

American Floor Surfacing Machine Co.  
Hild Floor Machine Co.

## FLOORS, STEEL FIREPROOF

Truscon Steel Company

## FLOOR SURFACING MACHINES

American Floor Surfacing Machine Co.

## FLOOR TILES

Congoleum-Nairn, Inc.  
Norton Company

## FLOOR TREATMENTS

Churchill Manufacturing Co.  
Continental Chemical Corporation  
Eagle Soap Corporation

## FLOORS, STEEL FIREPROOF

Truscon Steel Company

## FLOOR SURFACING MACHINES

American Floor Surfacing Machine Co.

## FLOOR TILES

Congoleum-Nairn, Inc.  
Norton Company

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Churchill Manufacturing Co.  
Continental Chemical Corporation  
Eagle Soap Corporation

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Norton Company

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Continental Chemical Corporation  
Eagle Soap Corporation

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Norton Company

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Continental Chemical Corporation  
Eagle Soap Corporation

## FLOORS, STEEL FIREPROOF

Truscon Steel Company

## FLOOR SURFACING MACHINES

American Floor Surfacing Machine Co.

## FLOOR TILES

Congoleum-Nairn, Inc.  
Norton Company

## FLOOR TREATMENTS

Churchill Manufacturing Co.  
Continental Chemical Corporation  
Eagle Soap Corporation

## FLOORS, STEEL FIREPROOF

Truscon Steel Company

## FLOOR SURFACING MACHINES

American Floor Surfacing Machine Co.

## FLOOR TILES

Congoleum-Nairn, Inc.  
Norton Company

## GYMNASIUM FLOORING

Carter Bloxonend Flooring Co.

## GYMNASIUM LOCKERS (STEEL)

Durabilt Steel Locker Co.

## HAIR DRIER

Chicago Hardware Foundry Co.  
(Sani-Dri Division)

## HEATING SYSTEMS

American Blower Company  
Buckeye Blower Co.  
Clow & Sons, Jas. B. ("Gasteam")  
Crane Company

Heggie Simplex Boiler Company  
Nelson Corp., The Herman  
Peerless Unit Ventilation Co., Inc.  
H. F. Sturtevant Co.

## HEATING AND VENT. SYSTEMS

American Air Filter Co.

## INKS

American Crayon Company  
Sanford Mfg. Co.

## INKWELLS

Sengbusch Self-Closing Inkstand Co.  
Squires Inkwell Company  
Tannet's Works, The  
U. S. Inkwell Company

## JANITORS' SUPPLIES



## *The junior-high-school movement and industrial education ~*

**T**HE early years of adolescence, as represented by the average age of the junior-high-school pupil, should be a time of self-testing and self-discovery, and the junior high school should be the testing ground wherein opportunities are provided for "browsing around" and for disclosing permanent aptitudes and interests. This is especially true in adjusting the abilities of the junior-high-school boy to the trades. He should be encouraged in discovering his own permanent interests, his reaches and limits of capacities, and the industry which

offers him, as an individual, the best mode of self-expression. The junior high school should assist him in choosing a life career in which he can be most happy and at the same time socially effective and serviceable. Obviously, then, the junior high school should furnish information and experiences regarding common vocations. The pupils ought to make a survey of the chief departments of industrial occupations and discover themselves from the standpoint of their interests and capacities.

**G**REAT strides have been made in this direction in the academic groups. Texts, meeting the new standards, have been advanced and widely accepted. And for the industrial arts and vocational education group there now appears **GENERAL MECHANICAL DRAWING** by R. A. McGee and W. W. Sturtevant which has been especially prepared to keep in pace with the idea of the junior high school and vocational adjustment. Mechanical drawing, as the graphic language of all industry, affords the opportunity to investigate each industry as its drafting needs are explained. This is exactly what the authors have done. Mechanical drawing as applied to one industry after another is explained, problems

are given, and a fairly comprehensive insight into the industry itself is included. Thus, the boy who finds his interests and aptitudes best adapted to the problems involved in the manufacture of machinery, is, at the same time, given an idea of what is demanded of the machine draftsman in actual industrial practice. The advantages of such a method as offering aid in the selection of a life's work are self-evident. By meeting the objectives of the junior high school and at the same time teaching the fundamentals of an important trade subject, **GENERAL MECHANICAL DRAWING** fills a need for the highest type of text for the junior-high-school, industrial-arts group.

### **The Bruce Publishing Company**

354-364 Milwaukee St., Milwaukee, Wis.

New York, N. Y.  
342 Madison Ave.

Chicago, Ill.  
66 E. South Water St.

# Directory of Equipment and Supplies

(Continued from Page 142)

## PANIC EXIT DEVICES

Potter Manufacturing Corp.  
Steffens-Amberg Company  
Vonnegut Hardware Company

## PAPER

American Crayon Company  
Arabol Mfg. Company  
Beckley-Cardy Company

## PENCILS

American Crayon Company

## PHYSICS EQUIPMENT

Welch Mfg. Co., W. M.

## PIANOS

Kimball Company, W. W.

## PLAYGROUND APPARATUS

Chicago Gymnasium Equipment Co.  
Hill-Standard Company  
Medart Mfg. Co., Fred  
Mitchell Manufacturing Co.  
Naragansett Machine Company  
Potter Manufacturing Corp.

## PLAYGROUND ENCLOSURES

Anchor Post Fence Company  
Cyclone Fence Co.  
Clay Equipment Corp.  
Page Fence Association  
Stewart Iron Works Co., The

## PLUMBING FIXTURES

Clow & Sons, James B.  
Crane Company  
Hoffmann & Billings Mfg. Co.  
Rundle-Spence Mfg. Company  
Vogel Company, Joseph A.

## POINTERS

N. Y. Silicate Book Slate Co.  
Weber Costello Company

## POLISHING AND WAXING EQUIP.

American Floor Surfacing Machine Co.  
Finnell System, Inc.

## PORTABLE BLEACHERS

Circle A Products Corp.  
Minter Homes Corporation  
Pittsburgh-Des Moines Steel Co.  
Wayne Iron Works

## PORTABLE SANDING MACHINES

American Floor Surfacing Machine Co.  
Clarke Sanding Machine Company

## PORTABLE SCHOOLHOUSES

American Portable House Co.  
Asbestos Buildings Co.  
Circle A Products Corporation  
Harris Brothers Company  
Minter Homes Corporation

## PROJECTION LANTERNS

Spencer Lens Co.  
Trans-Lux Daylight Picture  
Screen Corp.

## PROJECTION MACHINES

Atlas Educational Film Co.  
Eastman Teaching Films, Inc.  
National Theatre Supply Co.

## PROJECTORS

Bausch & Lomb Optical Co.  
Holmes Projector Company

## PUBLIC ADDRESS SYSTEMS

Graybar Electric Co., Inc.  
International Business Machines Corp.  
Multi-Selecto Phonograph, Inc.  
Western Electric Co.

## PUMPS—Vacuum, Condensation,

Centrifugal, Sump

Nash Engineering Co.

## PUPILS' DESKS

Rowles Co., E. W. A.

## RACKS, GYM. BASKET (STEEL)

Durabilt Steel Locker Co.

## RADIOS

Multi-Selecto Phonograph, Inc.  
Radio-Victor Corporation of America

## RANGES

Westinghouse Electric & Mfg. Co.

## RECORD SYSTEMS

Remington-Rand Business Service, Inc.

## REFRIGERATION

General Electric Company

## REINFORCED STEEL

Berger Manufacturing Company  
Truscon Steel Company

## REPRODUCTION SYSTEMS

Western Electric Co.

## ROLLING PARTITIONS

Wilson Corp., Jas. G.

## RULERS

Seneca Falls Rule & Block Co.

## SAFETY STAIR TREADS

American Abrasive Metals Co.

## SANDERS

American Floor Surfacing Machine Co.  
Clarke Sanding Machine Company  
Hill Floor Machine Co.

## SASH OPERATING DEVICES, STEEL

Detroit Steel Products Company  
Truscon Steel Company

## SASH, VENTILATING

Detroit Steel Products Company

## SCIENTIFIC APPARATUS

Central Scientific Co.  
Rowles Co., E. W. A.  
Standard Electric Time Company  
Welch Mfg. Co., W. M.

## SCREENS—PICTURE

Eastman Teaching Films, Inc.  
National Theatre Supply Co.  
Trans-Lux Daylight Picture  
Screen Corp.

## SEWAGE ELECTORS

Nash Engineering Co.

## SEWING MACHINES

Singer Sewing Machine Co.  
Shade Adjusters

## SHADE ADJUSTERS

Eveleth Mfg. Co.

## SHEARS AND SCISSORS

Acme Shear Co.

## SHOE LOCKERS (STEEL)

Durabilt Steel Locker Co.

## SHOWERS

Clow & Sons, James B.  
Crane Co.  
Hoffmann & Billings Mfg. Co.

## SIGNS

Hull Sign Company

## SLATED CLOTH

Beckley-Cardy Company  
N. Y. Silicate Book Slate Co.  
Rowles Co., E. W. A.  
Weber Costello Company

## SOUND PICTURES

Electrical Research Products, Inc.

## SOUND SYSTEMS

Multi-Selecto Phonograph, Inc.  
Radio Receptor Company, Inc.  
Western Electric Company

## SPRAY PAINTING EQUIPMENT

DeVilbiss Mfg. Co., The  
Vortex Mfg. Co.

## STAFF LINERS

Weber Costello Company

## STAGE CURTAINS, EQUIPMENT,

AND SCENERY

Acme Scenic Studios  
Beck & Sons Co., The Wm.  
Belson Mfg. Co.  
Jackson Corp., A. P.  
Novelty Scenic Studios  
Standard Decorating Co.  
Tiffin Scenic Studios  
Twin City Scenic Company  
Universal Scenic Studios, Inc.  
Volland Scenic Studios  
Weiss & Sons, I.

## STAIRS

Johnson & Son, S. C.

## STAIR TREADS

American Abrasive Metals Co.  
Norton Company  
Sanymetal Products Company

## STATIONERY CABINETS (STEEL)

Durabilt Steel Locker Co.

## STEEL JOISTS

Truscon Steel Company

## STEEL LOCKERS

All-Steel-Equip Co.  
Berger Manufacturing Co.  
Durabilt Steel Locker Co.  
Lyon Metal Products Co.  
Medart Mfg. Co., Fred  
Naragansett Machine Co.  
North Western Steel Products Co.

## STEEL STORAGE CABINETS

Berger Mfg. Co.  
Durabilt Steel Locker Co.  
Lyon Metal Products, Inc.  
Medart Mfg. Co., Fred  
North Western Steel Products Co.

## STEEL WINDOWS

Detroit Steel Products Company  
North Western Steel Products Company  
Truscon Steel Company

## STORAGE CABINETS (STEEL)

Durabilt Steel Locker Co.

## TABLES

Kimball Company, W. W.  
Mutschler Bros. Company  
Remington-Rand Business Service, Inc.  
Welch Mfg. Co., W. M.

## TALKING MACHINES

Russell & Sons Co., Albert

## TALKING MACHINES

Atlas Educational Film Co.  
Radio-Victor Corporation

## TEACHER AGENCIES

Natl. Association of Teacher Agencies  
Teacher Agencies Directory

## TEACHERS' CABINETS (STEEL)

Durabilt Steel Locker Co.

## TECHNICAL PAINTS

Sonneborn Sons, L.

## TELEPHONE SYSTEMS

Automatic Electric Company  
Graybar Electric Co., Inc.  
International Business Machines Corp.  
North Electric Mfg. Company, The  
Standard Electric Time Company

## TEMPERATURE REGULATION

Johnson Service Company

## TOOL CABINETS (STEEL)

Durabilt Steel Locker Co.

## TOWELS

Brown Company

## TOILET PARTITIONS

Clow & Sons, James B.  
Sanymetal Products Company  
Structural Slate Company  
Weiss Mfg. Co., Henry

## TYPEWRITERS

Remington-Rand Business Service, Inc.  
Smith & Corona Typewriters Inc., L. C.  
Underwood Typewriter Company

## VACUUM CLEANING SYSTEMS

Spencer Turbine Company, The  
Sturtevant Co., B. F.

## VACUUM PUMPS

Nash Engineering Company

## VALVES—FITTINGS

Clow & Sons, James B.  
Crane Company

## VARNISHES

Wis-Co-Lac Co., The

## VENETIAN BLINDS

Burlington Venetian Blind Co.

## VENTILATING SYSTEMS

Buckeye Blower Company  
Nelson Corp., The Herman  
Peerless Unit Vent. Co., Inc.  
Sturtevant Company, B. F.

## VENTILATORS

Sturtevant Co., B. F.

## VISUAL INSTRUCTION EQUIPMENT

Keystone View Co.

## VOCATIONAL EQUIPMENT

Christiansen, C.  
Columbia School Supply Co.  
Planagan Company, A.  
Kimball Company, W. W.  
Richards-Wilcox Mfg. Co.  
Sheldon & Company, E. H.  
Wallace & Company, J. D.

## WARDROBES

Evans, W. L.  
K-M Supply Company  
Park, Winton & True Co.  
Richards-Wilcox Mfg. Company  
Wilson Corp., Jas. G.

## WARDROBE CABINETS—STEEL

Durabilt Steel Locker Co.

## WASTE PAPER BASKETS

National Vulcanized Fibre Co.  
North Western Steel Products Company

## WASTE RECEPTACLES

Solar-Sturges Mfg. Co.

## WATER CLOSETS

Crane Co.  
Clow & Sons, James B.  
Vogel Co., Joseph A.

## WATER COLORS

American Crayon Company

## WATER PURIFIERS

Clow & Sons, Jas. B. (R. U. V.)  
Wallace & Tiernan, Inc.

## WATERPROOFING

Sonneborn Sons, L.  
Truscon Steel Company

## WAXING EQUIPMENT

Finnell System, Inc.

## WEATHERSTRIPS

Athy Company, The

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Austral Window Company  
Detroit Steel Products Company  
The Kawneer Company  
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Universal Window Company  
Williams Pivot Sash Company

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Austral Window Company  
Columbia Mills, Inc.  
Peerless Unit Ventilation Co., Inc.  
Williams Pivot Sash Company

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American Fence Construction Co.  
Badger Wire & Iron Works  
Stewart Iron Works Co., The

## WINDOWS—REVERSIBLE

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Williams Pivot Sash Company

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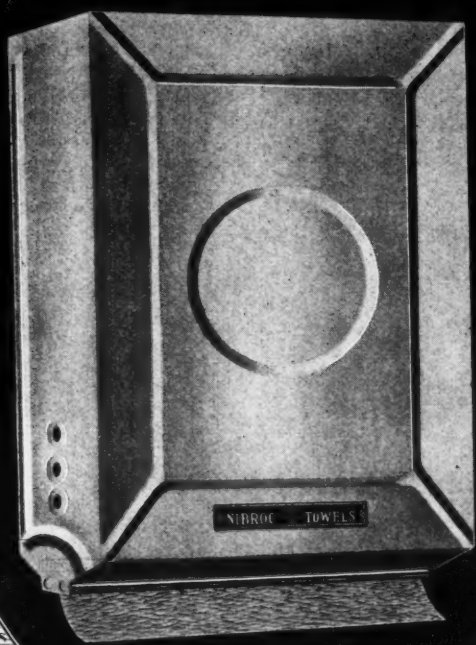
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Guardians  
of health  
Exponents  
of economy

## NIBROC TOWELS

THE very finest and most economical paper towels you can obtain—they exceed all expectations! Their outstanding emollient and antiseptic qualities, together with their great strength and absorption will convince you. ¶ NIBROCS are made only from long, pure spruce fibres, in *brilliant white* and *golden brown*. One single NIBROC will thoroughly dry the wettest hands without falling to pieces. ¶ In school washrooms, NIBROCS are a necessary factor in maintaining wholesome conditions. They encourage children to wash their hands more often and eliminate the spreading of infectious diseases found on common cloth or roller towels. ¶ NIBROCS are lintless, and are served clean and fresh, individually from dust-proof, key-locked, enameled cabinets, which are loaned without charge. Write for generous supply of NIBROCS today.



FOUNDED 1852

Portland, Maine



## After the Meeting



### A CURE FOR NARROWNESS

Mr. Augustus O. Thomas, formerly state commissioner of education for Maine, tells an amusing yet thought-provoking incident:

I am a little touchy about jokes. Jokes are all right if they do not fit anybody. A person who uses them should know how, where, and when. Perhaps the joke which has gone farther and which seems to be original with the writer is as follows:

"It was in the days when bobbed hair first became fashionable. I was very much prejudiced against it. All the girls and women I knew had long hair. It distinguished them from the short-haired women or the long-haired men.

"One day, when I had firmly fixed my mind that the bob was wrong, the little girl who takes my dictation came into my office with her hair bobbed. She had it frizzed until it stood out, each hair in its own direction. I was shocked and said to her in my deepest tones: 'Why, Florence, what in the world have you done? Do you think that is dignified around the office of the Commissioner of Education of the state of Maine?'

"But these young folks are very resourceful and very self-possessed. They are almost supercilious. She came over to the back side of my desk, looked me squarely in the eyes and said, 'Dr. Thomas, I don't see why you should object. I don't mind the funny way you wear your hair.'

"I now allow other people to have their own opinion of things."

### Browning Preferred the University

Arnold Bennett, in a recently published work tells of a talk he had with a famous editor, who at one time had dinner with Tennyson and Browning at Oxford. After the dinner, Browning walked with the editor about the Quad and was most affable and interesting. In the course of the conversation, Browning said: "They have given Tennyson a baronetcy, and me a fellowship of Balliol. I prefer the fellowship."

### Followed Teacher's Orders

Johnny and his father were inspecting the new furnace.

"Dad," he asked, "is that furnace made out of girlvanized iron?"

"Don't say girlvanized, say galvanized."

"Sure, Dad, but our teacher says we mustn't say gal—we must say girl."

Bertie (at the dinner-dance): "Hullo, Professor! Who'd have expected to see you here?"

Professor: "As a matter of fact, my boy, I intended to forget the engagement but forgot to forget."



A CRIME OF TODAY  
—The Milwaukee Sentinel.

### Reclassified

A school teacher in a western town, wishing to extend her rather scanty knowledge of the stories of Edgar Allan Poe, inquired at the delivery desk of the rural library for "The Gold Bug," adding, "I can't seem to find it in the catalog, but I am sure you have it. A friend of mine had it out last week."

The librarian glanced at the card-catalog drawer over which the teacher had been poring, and smiled a superior smile. "No wonder, Miss Smith," she explained with patient gentleness. "You're looking under 'Fiction.' Turn to 'Entomology' and you won't have any trouble."—The Argonaut.

### Showing Results

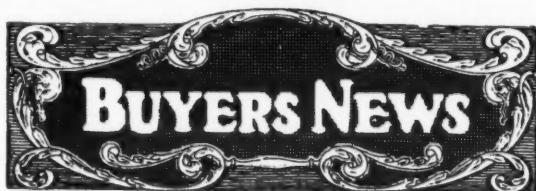
Teacher: "Surely you know what the word 'mirror' means, Tommy. After you've washed, what do you look at to see if your face is clean?"

Tommy: "The towel, sir!" — Melbourne Table Talk.

### Another Version

Teacher: "James, if you are always very kind and polite to your playmates, what will they think of you?"

James: "They would think they could lick me!"



### NEW CATALOGS

**Faber Issues School Catalog.** The Eberhard Faber Pencil Company has just issued its new 1930 school catalog, which illustrates and describes items of interest to the purchaser of school supplies.

A copy of the catalog will be sent to any school official upon request.

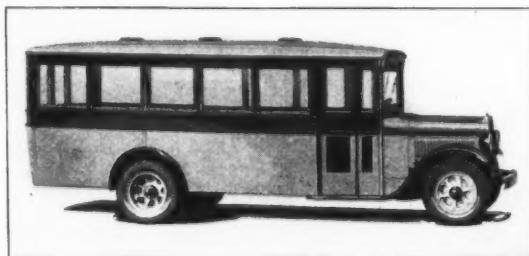
**New Standard Course in Pitman Shorthand.** Isaac Pitman & Sons, New York City, have just announced a new standard course in Pitman shorthand, which seeks to reduce the learning time in acquiring the principles of the subject. The book is the result of experiments conducted by experienced teachers of stenography in ten of the leading high schools, and is intended to save the time of teachers and students. The book has the approval of the textbook committee of the Pitman Commercial Teachers' Association.

### NEW TRADE PRODUCTS

**The Sani-Dri for School Washrooms.** The Chicago Hardware Foundry Company, of North Chicago, Ill., has issued a special pamphlet, illustrating and describing its new SF Sani-Dri for efficient drying in school washrooms. The Sani-Dri provides faster, better service, costs little to operate, eliminates the problem of filling towel cabinets, banishes insanitary soiled towels, improves the appearance of the washroom, prevents congestion, and reduces towel bills from 60 to 90 per cent. The Sani-Dri has been installed successfully in schools, colleges, and other public buildings.

Complete information and prices may be obtained from the Chicago Hardware Company upon request.

**New Dodge School Busses.** The Dodge Brothers Corporation has announced a complete new line of school busses, embodying advanced features of mechanical design and construction, together with improvements in seating arrangement and other essentials for good school transportation.



THE NEW DODGE SCHOOL BUS

The new line embraces six models, and is intended to reflect in outward appearance the impressive architectural treatment of the modern educational institutions which often stand as monuments to civic pride.

The Dodge school busses have the advantages of attractive, pleasing lines, as well as proper distribution of weight, ease of entrance and exit, ample ventilation, clear vision, spacious headroom, aisle space, and leg room. They are designed for maximum economy of operation, safety, pupil and driver comfort and health.

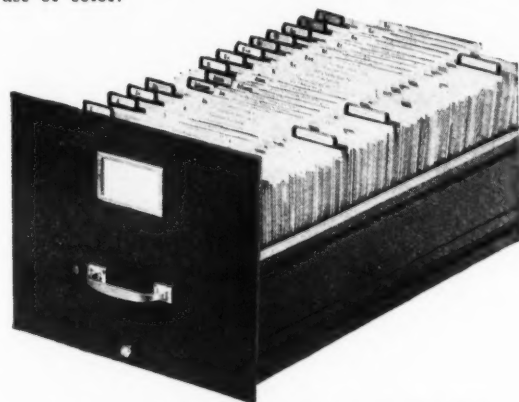
**New Jenkins Standard Bronze Valves.** Jenkins Brothers, of 80 White Ct., New York City, have announced the publication of their new Bulletin No. 141,

describing and illustrating the new, improved line of Jenkins standard bronze valves for hot or cold water, air, gas, oil, gasoline, or other fluids.

The Jenkins valves are made in globe, angle, cross, and check type for all standard services, and are constructed of electric-furnace bronze, carefully selected and analyzed by the Jenkins metallurgists. The one-piece screw-over bonnet, used in connection with the slip-on, stay-on disk holder, is a new device in bronze-valve design and construction. It is strong in construction, generously proportioned in design, and machined with accuracy. Its large hex faces offer easy and full purchase with a wrench. The one-piece construction insures ease in removal, contributes unusual strength, prevents springing or distortion, and allows the bonnet to be removed from the valve body, without danger of the disk holder slipping from the spindle.

A copy of the bulletin, giving a description of the Jenkins valves will be sent to any school official, or architect, upon request.

**New Remington-Rand System of Filing.** The Remington-Rand Business Service, Inc., of Buffalo, New York, has announced two new methods of indexing and vertical filing, which are flexible to meet economically the increasing complexity of present-day files and lists, and which effect new speed through the use of color.



THE NEW REMINGTON-RAND VARIADIX  
FILING TABS

The new system provides for a variadex, a new direct-expanding index, in letter, bill, and legal sizes, providing for tab positions and for familiar sectional arrangement for guides, individual, and miscellaneous folders; a triple-check automatic arrangement of captions and subdivisions which are automatic in operation, speedy and economical, as well as a color as a means of checking for accuracy. Complete information and prices may be obtained from the Remington-Rand Company upon request.

**New Dick Mimeograph.** The A. B. Dick Company, of Chicago, Illinois, has announced its new Model 96 mimeograph, which sets a new standard of speed, simplicity, and accuracy in mimeographing work. The machine has a feed table capable of accommodating 500 sheets of paper, which may be printed without interruption. Paper stock in lengths from 5½ to 16 in., may be accommodated easily, while cardboard stock in heavy weights can be fed with good results.

A backstop aligns the stack and insures uniform registration. The automatic feed control drops the feed table automatically when the paper is consumed, thus stopping the printing. The feed device is so constructed that there is no danger of paper becoming jammed in the printing operation. Adjustments are simple, especially those for lengths and widths of paper. A closed cylinder containing an automatic inking system, completes the equipment. The stand is designed for hand and electric operation, and a motor may be furnished.

Complete information and prices concerning the No. 96 mimeograph may be obtained by any school official upon request.

**New Line of Tubular Steel Tables and Chairs.** The American Seating Company, Chicago, Ill., manufacturers of school furniture, have recently announced a new and attractive line of tubular steel tables and chairs for classroom and general school purposes. The tables are designed with graceful end standards of tubular steel and panel construction, finished in two colors, and a structural device by which all parts are placed under the center of the table, eliminating troublesome stretchers and corner legs found in most tables. The tops are of birch, framed in maple, and finished in lacquer. These tables are durable, low in cost, and may be used with no interference with legs or knees below the table top.

Steel-frame chairs in similar design and construction are offered, with special attention to the wood parts, and with attractive upholstered backs. Through careful study of the designs and proportions, a new level has been attained in achieving comfort and good posture in economical equipment.

The Company maintains a school consulting staff, which is constantly at the service of school authorities desiring assistance on seating problems. Complete information and prices may be obtained by any school official upon request.





## One Way to Reduce Overhead

**T**HE unfortunate aspect of most plans to reduce overhead is that they require a considerable initial capital investment.

There is one major item of property ownership overhead that may be reduced appreciably and safely—and with no initial investment. It is the item of fire insurance.

Thousands of property owners, corporations, estates, partnerships and individuals are turning to strong, legal reserve, mutual fire insurance companies for the safety and saving they offer. A mutual corporation is under no compulsion to make profits for stockholders—for there are no stockholders.

### *An Unparalleled Record*

75 leading, legal reserve companies under State supervision constitute the Federation of Mutual Fire Insurance Companies. The oldest Federation company was founded in 1752. Five others are more than 100 years old.

Of the remaining companies—

9 are between 75 and 100 years old  
10 are between 50 and 75 years old  
30 are between 25 and 50 years old  
20 are between 10 and 25 years old

The Federation companies are protecting property to the extent of six billion dollars—have assets in excess of ninety million dollars—have returned to policyholders savings of more than one hundred and thirty millions of dollars.

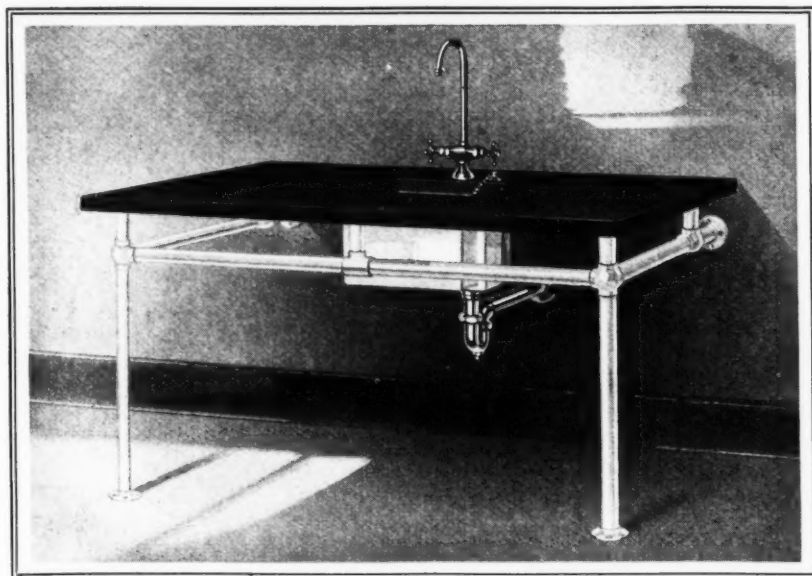
The sole aim and the one authentic measure of the ability of mutual management, is to furnish sound insurance at the lowest possible cost to the insured.

Mutual Fire Insurance has served American property owners for 178 years. Few periods in that time have presented so definite and practical a need for its saving and service.

A booklet is available on request. It will help any property owner to judge of the merits of the various types of fire insurance carriers. Address Mutual Fire Insurance, Room 2202-C, 180 North Michigan Avenue, Chicago, Illinois.

*Mutual Fire Insurance*  
FEDERATION OF MUTUAL FIRE  
INSURANCE COMPANIES

1855 • SEVENTY-FIFTH ANNIVERSARY • 1930



Crane laboratory sink, C6880

## Choosing a source for plumbing materials differs little from choosing an architect

In an illuminating article appearing in a recent issue of the *School Board Journal*, the important question of choosing an architect is discussed. It is interesting to note that the points made in it are equally pertinent to choosing a source for plumbing materials.

Take the formula, for example, given as a means of measuring the worth of an architect . . . "past results, experience, competence, location, and character" . . . and apply it to Crane Co.

In the great number of schools throughout the country Crane installations are establishing new levels of efficiency, sanitation, and

low maintenance costs. This is possible because Crane Co. has a background of 75 years in manufacturing. Because it has made an intensive study of school needs, and as a result evolved a line of special materials for schools that is complete in every detail.

Its distribution system is so well worked out that at 196 central points it maintains branches and sales offices to render the quickest service possible to any of its customers. One of these branches is near you. You are cordially invited to visit it, and to discuss any of your piping and plumbing problems with Crane men.

Valves



# CRANE



Fittings

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVENUE, CHICAGO

NEW YORK OFFICES: 23 W. 44TH STREET

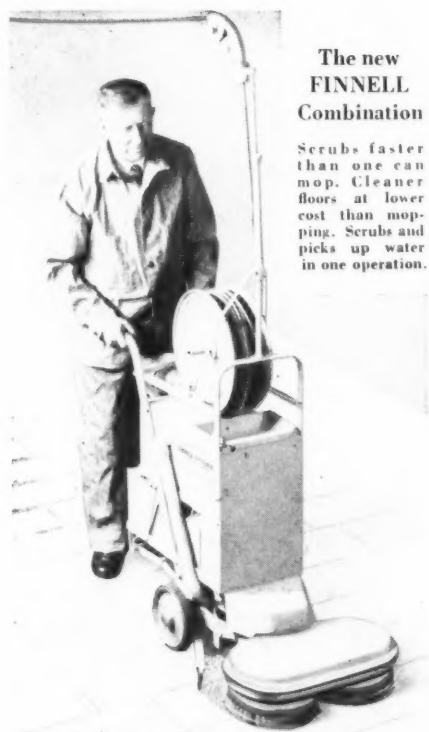
Branches and Sales Offices in One Hundred and Ninety-six Cities



# MAKE THIS TEST



*Try it on YOUR Floor Now*



The new  
FINNELL  
Combination

Scrubs faster  
than one can  
mop. Cleaner  
floors at lower  
cost than mop-  
ping. Scrubs and  
picks up water  
in one operation.

**D**AMPEN a sponge. Squeeze a few drops of water from it onto a section of the floor which hand scrubbers have just gone over. Sprinkle a little abrasive powder (such as Finola). Then rub firmly with the sponge for a moment.

Does a clean spot show up, in what you thought was a clean floor? You may say, this could be done on any floor. But let one of our men go over that same floor with a FINNELL Scrubber. Then try the "Sponge test." See if you get anything like the spot you could on the hand-scrubbed floor.

Schools should be the cleanest buildings in the community. The FINNELL Scrubber-Polisher will keep

them so. Such floors will exert a definite influence upon both teaching staff and pupils, encouraging cleanliness and orderliness of both person and surroundings, virtues which modern education should include.

Why not investigate now and quit wasting time and money on old-fashioned methods which get floors only half clean? Eight models of the FINNELL Scrubber-Polisher, together with auxiliary equipment, permit twenty different systems. Let us make a survey of floors in your schools and recommend the system best adapted to your needs. Address: FINNELL SYSTEM, INC., 810 East Street, Elkhart, Indiana.



For homes, too.

Finnell for home use. Twin disc. High speed. Ample power. Price anyone can afford. Waxes, polishes, finishes, scrubs, — wet or dry. Sold on terms.

## A Size for Every Purpose

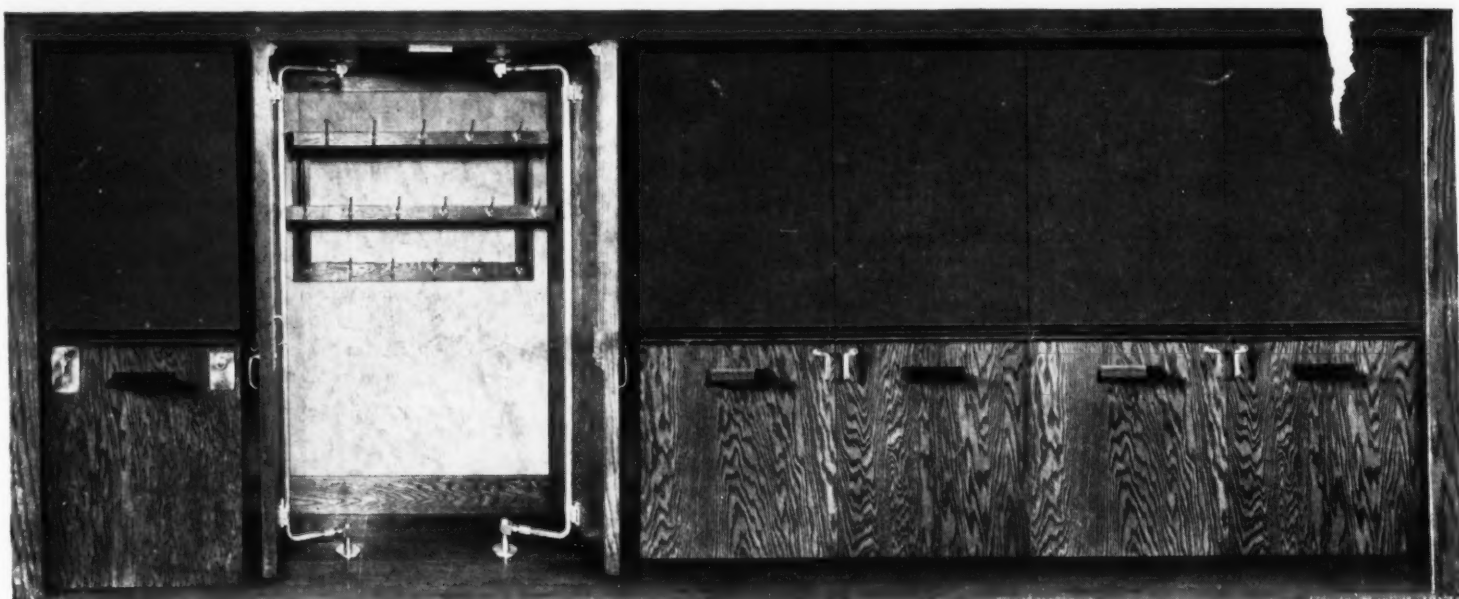
The FINNELL scrubs and polishes — electrically, exerting from 35 to 60 pounds pressure on the brushes (depending upon the size of the machine). Clean water is provided for every square inch of floor space and the brushes dig down beneath surface dirt until every particle is routed, even from between the cracks and crevices.

# FINNELL

Est. 1906

## ELECTRIC FLOOR SCRUBBER-POLISHER

*It waxes . It polishes . It finishes . It scrubs*



# AUSTRAL *MULTI UNIT* SCHOOL WARDROBE

## ***Keeping Pace With the Modern School***

In many respects the excellence of modern school design has not been carried on through the classrooms.

The newest, most up-to-date equipment for modern interior construction is the AUSTRAL SCHOOL WARDROBE.

AUSTRAL engineers found their craftsmanship and experience in perfecting the AUSTRAL WINDOW of greatest value in developing their new product.

Now comes the WARDROBE, meeting a long needed requirement, distinctly superior and quality equipment, unit built.

It conserves space;  
Is attractive;  
Is thoroughly ventilated;  
Is built like a battleship,  
adjusted like a watch.

These are only a few of its virtues. A new catalogue explains the AUSTRAL WARDROBE thoroughly.

IT IS MODERN \* \* ORIGINAL  
CONVENIENT \* PERMANENT

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